

1 M. ELIZABETH DAY (SBN 177125)  
 2 eday@feinday.com  
 3 DAVID ALBERTI (SBN 220265)  
 4 dalberti@feinday.com  
 5 SAL LIM (SBN 211836)  
 6 slim@feinday.com  
 7 MARC BELLOLI (SBN 244290)  
 8 mbelloli@feinday.com  
 9 **FEINBERG DAY ALBERTI LIM &**  
 10 **BELLOLI LLP**  
 11 1600 El Camino Real, Suite 280  
 12 Menlo Park, CA 94025  
 13 Tel: 650.618.4360  
 14 Fax: 650.618.4368

11 *Attorneys for Plaintiff*  
 12 Cellular Transitions, LLC

14 UNITED STATES DISTRICT COURT  
 15 CENTRAL DISTRICT OF CALIFORNIA

16 CELLULAR TRANSITIONS, LLC,  
 17 Plaintiff,  
 18 v.  
 19 ASUSTEK COMPUTER INC. and ASUS  
 20 COMPUTER INTERNATIONAL,  
 21 Defendants.

CASE NO. 2:18-cv-07807

**COMPLAINT FOR PATENT  
 INFRINGEMENT**  
  
**JURY TRIAL DEMANDED**

22  
 23  
 24  
 25  
 26  
 27  
 28

1 Plaintiff Cellular Transitions, LLC (“CellTran”), by and through the  
2 undersigned counsel, hereby brings this action and makes the following allegations  
3 of patent infringement relating to U.S. Patent Nos. 8,855,637 (“the ’637 patent”)  
4 and 9,888,425 (“the ’425 patent”) against ASUSTeK Computer, Inc. and ASUS  
5 Computer International (collectively, “ASUS”), and alleges as follows upon actual  
6 knowledge with respect to itself and its own acts, and upon information and belief  
7 as to all other matters:

8 **NATURE OF THE ACTION**

9 1. This is an action for patent infringement. CellTran alleges that ASUS  
10 infringes one or more claims of the ’637 patent and the ’425 patent, copies of which  
11 are attached as Exhibits A-B, respectively (collectively “the Asserted Patents”).

12 **THE PARTIES**

13 2. Plaintiff MPV is a Texas limited liability company with its principal  
14 place of business in Plano, Texas.

15 3. Upon information and belief, Defendant ASUSTeK Computer Inc., is  
16 a Taiwanese corporation with a place of business at No. 15, Li-Te Road, Beitou  
17 District, Taipei 112, Taiwan, R.O.C.

18 4. Upon information and belief, ASUS Computer International is a  
19 corporation organized and existing under the laws of California with a place of  
20 business at 800 Corporate Way, Fremont, CA 94539, with a registered agent for  
21 service of process at CT Corporation System, 818 W 7th St., Suite 930, Los  
22 Angeles, CA 90017. In addition to its registered agent, CellTran is informed and  
23 believes that ASUS Computer International and/or ASUSTeK Computer Inc. have  
24 other regular and established places of business in this District including authorized  
25 service centers ([http://www.californiacomputer.com/asus-authorized-service-](http://www.californiacomputer.com/asus-authorized-service-centre)  
26 [centre](http://www.californiacomputer.com/asus-authorized-service-centre)).

27  
28

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28

**JURISDICTION AND VENUE**

5. This action for patent infringement arises under the Patent Laws of the United States, 35 U.S.C. § 1 et. seq. This Court has original jurisdiction under 28 U.S.C. §§ 1331 and 1338.

6. This Court has personal jurisdiction over ASUS because ASUS has committed acts within the Central District of California giving rise to this action and has established minimum contacts with this forum such that the exercise of jurisdiction over ASUS would not offend traditional notions of fair play and substantial justice. ASUS, directly and through subsidiaries and intermediaries (including distributors, retailers, franchisees and others), has committed and continues to commit acts of infringement in this District by, among other things, making, using, testing, selling, importing, and/or offering for sale products that infringe the Asserted Patents.

7. Venue is proper in this district and division under 28 U.S.C. §§ 1391(b)-(d) and 1400(b) because ASUS has committed acts of infringement in the Central District of California, ASUSTeK Computer Inc. is a foreign corporation and ASUS Computer International is a California corporation and one or both defendants have one or more regular and established places of business in this District.

**COUNT 1: INFRINGEMENT OF U.S. PATENT NO. 8,855,637**

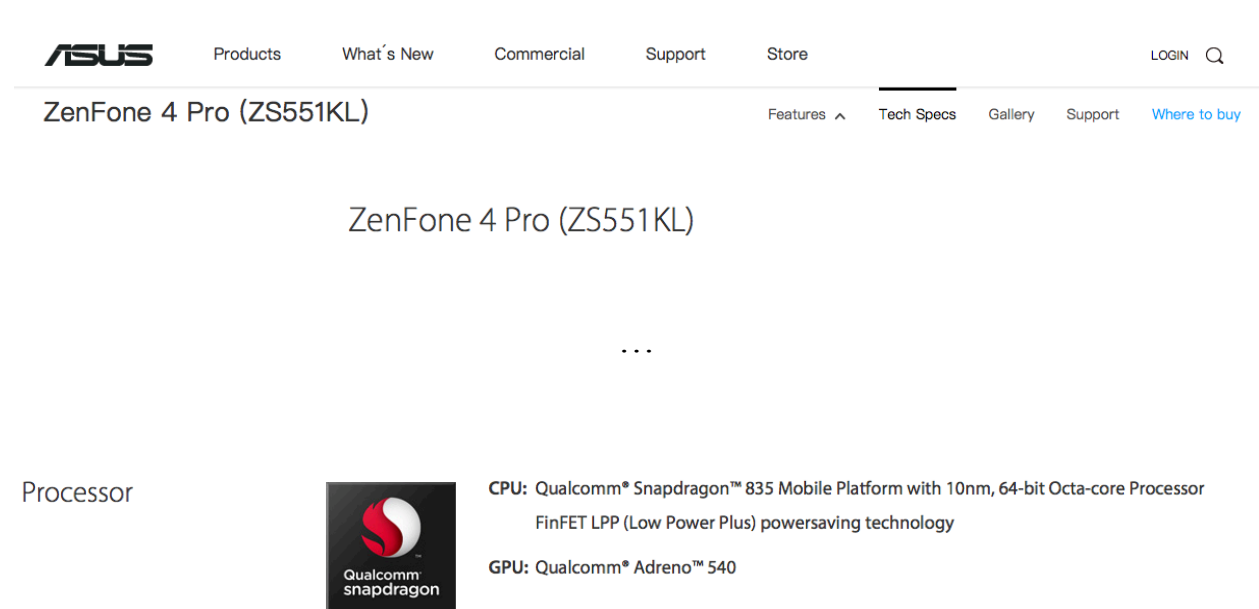
8. The allegations of paragraphs 1-7 of this Complaint are incorporated by reference as though fully set forth herein.

9. CellTran owns by assignment the entire right, title, and interest in the '637 patent.

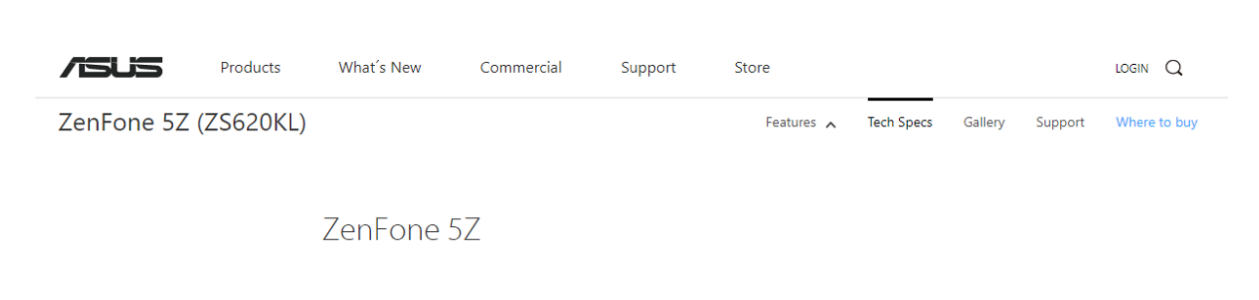
10. The '637 patent was issued by the United States Patent and Trademark Office on October 7, 2014, and is titled "Methods and Apparatus for Performing Handoff Based on the Mobility of a Subscriber Station." A true and correct copy of the '637 patent is attached as Exhibit A.

1 11. Upon information and belief, ASUS has infringed at least claim 13 of  
 2 the '637 patent by making, using, testing, selling, offering for sale, importing  
 3 and/or licensing in the United States licensed assisted access (LAA) mobile  
 4 devices, including phones and laptops, including at least the Zenfone 4 Pro,  
 5 ZenPhone 5Z, and the NovaGo laptop (collectively the “Accused Infringing  
 6 Devices”) in an exemplary manner as described below.

7 12. The Accused Infringing Devices are subscriber stations sometimes  
 8 referred to as user equipment (“UE”), which support LTE-Advanced connectivity  
 9 and LAA technology. For example, the ZenPhone 4 Pro and the NovaGo laptop  
 10 use the Snapdragon 835 mobile platform, while the ZenPhone 5Z uses the  
 11 Snapdragon 845 mobile platform. Both the Snapdragon 835 and the Snapdragon  
 12 845 support LAA.



23 <https://www.asus.com/us/Phone/ZenFone-4-Pro-ZS551KL/Tech-Specs/>



1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28

Processor



CPU: Qualcomm® Snapdragon™ 845 Mobile Platform with 10nm, 64-bit Octa-core Processor with AI Boost

FinFET LPP (Low Power Plus) powersaving technology

GPU: Qualcomm® Adreno™ 630

<https://www.asus.com/us/Phone/ZenFone-5Z-ZS620KL/Tech-Specs/>



### ASUS NovaGo TP370QL-6G128G Convertible Laptop with Gigabit LTE (Unlocked)

★★★★★ 11

- 13.3-inch Full HD display
- Qualcomm® Snapdragon™ 835 Mobile PC Platform
- 6GB memory/128GB eMMC

More

[https://www.microsoft.com/en-us/p/asus-novago-tp370ql-6g128g-convertible-laptop-with-gigabit-lte-unlocked/8z6d8jn7cgg9?icid=PC\\_cat\\_ACPC-ASUS-06042018&activetab=pivot:overviewtab](https://www.microsoft.com/en-us/p/asus-novago-tp370ql-6g128g-convertible-laptop-with-gigabit-lte-unlocked/8z6d8jn7cgg9?icid=PC_cat_ACPC-ASUS-06042018&activetab=pivot:overviewtab)

Qualcomm | Products ▾ / Platforms ▾ / Snapdragon 835 Mobile Platform

## Snapdragon 835 Mobile Platform

With an advanced 10-nanometer design, the Qualcomm® Snapdragon™ 835 mobile platform can support phenomenal mobile performance. It is 35% smaller and uses 25% less power than previous designs, and is engineered to deliver exceptionally long battery life, lifelike VR and AR experiences, cutting-edge camera capabilities and Gigabit Class download speeds.

Qualcomm Snapdragon processors are a product of Qualcomm Technologies, Inc.

# Hardware and Software

[Compare Snapdragon 800 Series Mobile Platforms >](#)

PROCESSOR

MSM8998

CELLULAR  
MODEM

Qualcomm® Snapdragon™ X16  
LTE modem

Peak Download Speed: 1 Gbps

Peak Upload Speed: 150 Mbps

<https://www.qualcomm.com/products/snapdragon/processors/835>

## Cellular Modem

Chipset

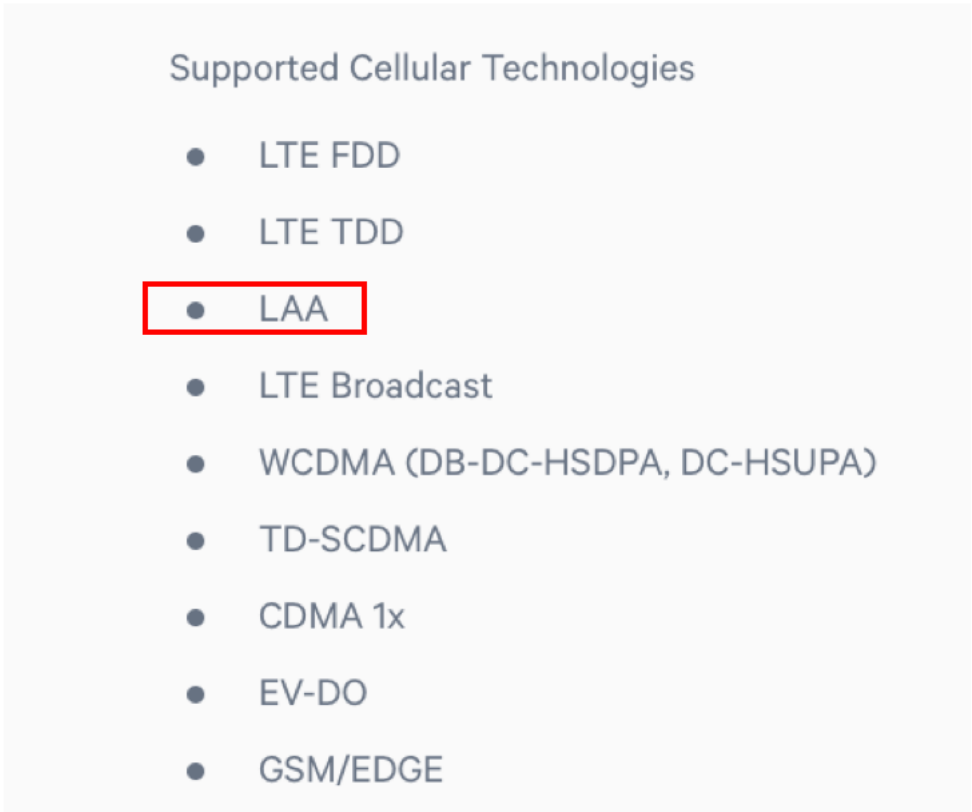
- Snapdragon X16 LTE Modem

LTE Category

- LTE Category 16 (downlink)
- LTE Category 13 (uplink)

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28



<https://www.qualcomm.com/products/snapdragon/modems/4g-lte/x16>

## SDM845

Purpose-built for mobile, the SDM845 is ideal for premium mobile experiences. SDM845 supports new architectures for AI and immersive virtual reality, as well as gigabit LTE and a new security architecture.

### Cellular Modem

Modem Name

- Qualcomm® Snapdragon™ X20 LTE modem

### Supported Cellular Technologies

- LTE FDD
- LTE TDD
- LAA
- LTE Broadcast
- WCDMA (DB-DC-HSDPA, DC-HSUPA)
- TD-SCDMA
- CDMA 1x
- EV-DO
- GSM/EDGE

<https://www.qualcomm.com/products/sdm845>

13. The Accused Infringing Devices contain a front end module configured to establish a service with a base station via a non-licensed spectrum. For example, the Accused Infringing Devices contain front end components that convert information into radio signals that can be transmitted and received over the air.

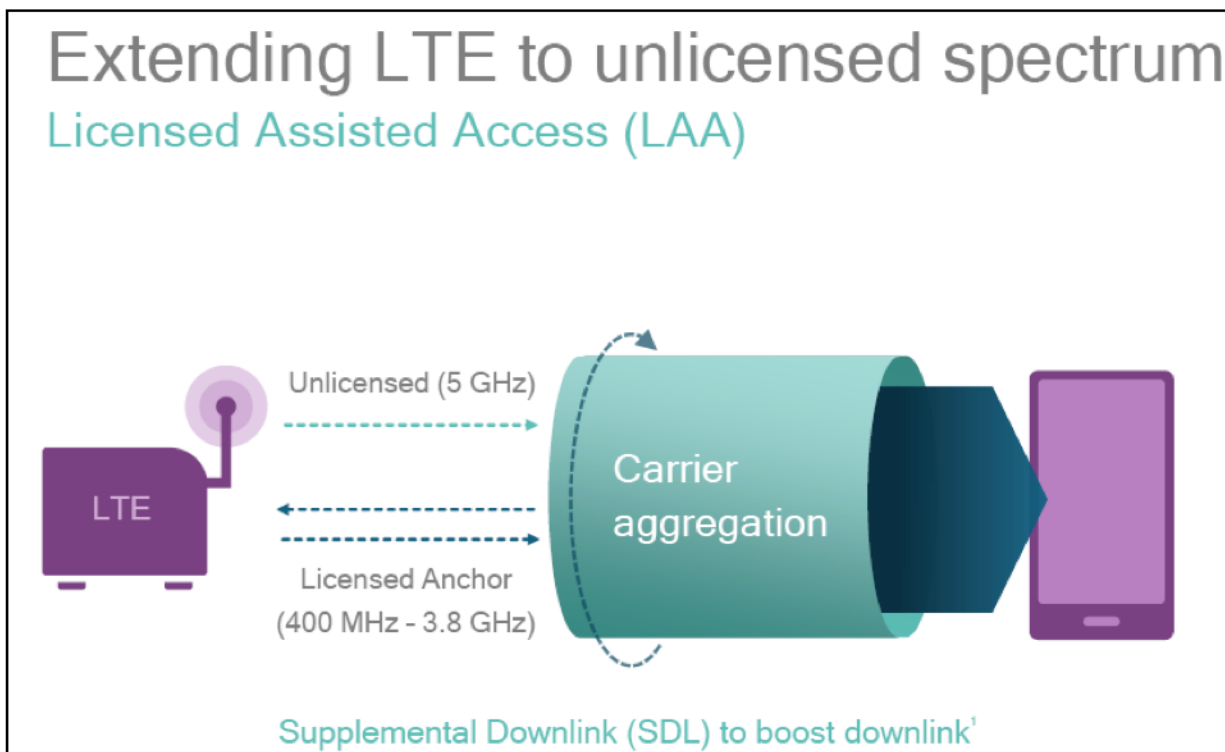
**RFFE (RF Front-End):**

RF Front End (RFFE) refers to a set of mobile device components that convert information into radio signals that can be transmitted and received over the air. RFFE components work in conjunction with a device's modem and antenna.

<https://www.qualcomm.com/news/onq/2017/02/23/mwc-2017-fundamentals-cheat-sheet>

14. Being LAA-enabled UE, the Accused Infringing Devices are configured to establish a service with a base station (“eNB”) in a non-licensed (alternatively referred to as “unlicensed”) spectrum.





<https://www.qualcomm.com/media/documents/files/laa-webinar-feb-2016.pdf>

15. The Accused Infringing Devices contain a mobility monitoring module. For example, the Accused Infringing Devices include a mobility monitoring module within its cellular baseband processor, such as the Qualcomm Snapdragon x16 LTE modem.

<https://www.qualcomm.com/news/onq/2017/10/13/lg-v30-and-snapdragon-835-unite-premium-photography-security-and-mobile-vr>

16. The mobility monitoring module in the Accused Infringing Devices is configured to determine a first value of a mobility factor indicative of a relative motion of the subscriber station communicating using non-licensed spectrum. For example, the Accused Infringing Devices will make radio resource management measurements representing one or more values of a mobility factor and report them to LTE LAA-enabled base stations.

## 5.5 Measurements

### 5.5.1 Introduction

The UE reports measurement information in accordance with the measurement configuration as provided by E-UTRAN. E-UTRAN provides the measurement configuration applicable for a UE in RRC\_CONNECTED by means of dedicated signalling, i.e. using the *RRCConnectionReconfiguration* or *RRCConnectionResume* message.

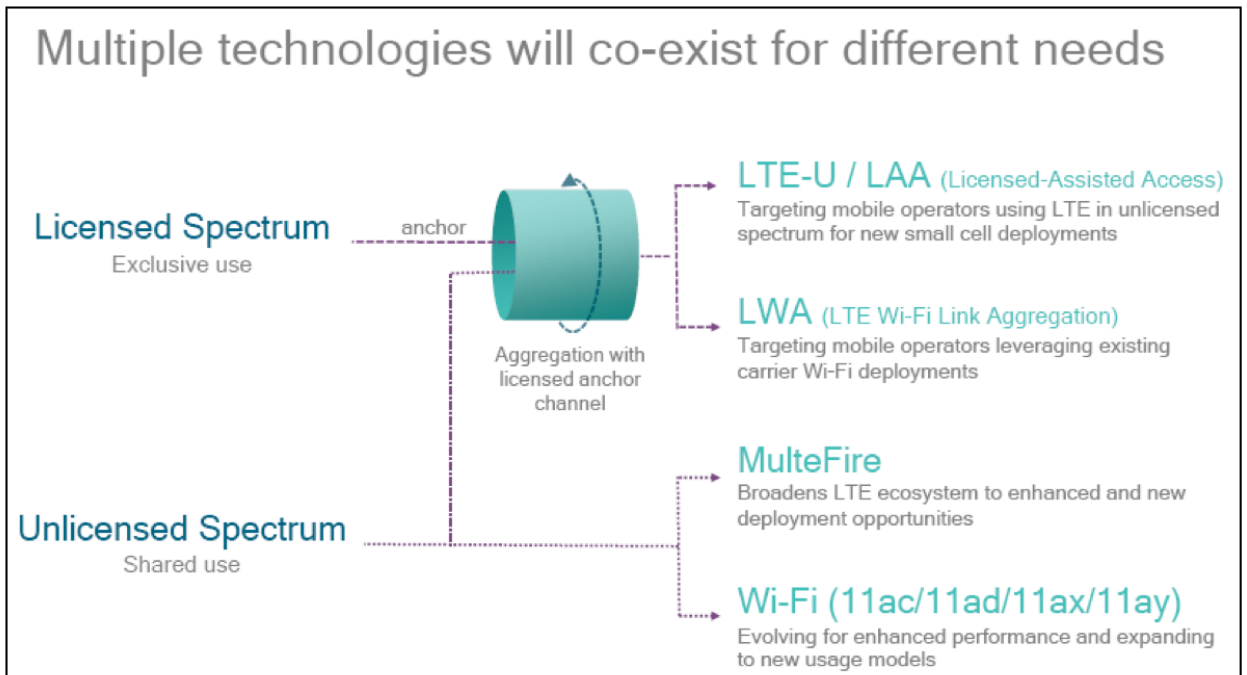
The UE can be requested to perform the following types of measurements:

- Intra-frequency measurements: measurements at the downlink carrier frequency(ies) of the serving cell(s).
- Inter-frequency measurements: measurements at frequencies that differ from any of the downlink carrier frequency(ies) of the serving cell(s).
- Inter-RAT measurements of UTRA frequencies.
- Inter-RAT measurements of GERAN frequencies.
- Inter-RAT measurements of CDMA2000 HRPD or CDMA2000 1xRTT or WLAN frequencies.

ETSI TS 136 331 V13.8.1 (2018-01)

[https://www.etsi.org/deliver/etsi\\_ts/136300\\_136399/136331/13.08.01\\_60/ts\\_136331v130801p.pdf](https://www.etsi.org/deliver/etsi_ts/136300_136399/136331/13.08.01_60/ts_136331v130801p.pdf)

17. The mobility monitoring module in the Accused Infringing Devices is configured to determine availability of the service via a licensed spectrum. For example, the mobility monitoring module within the Qualcomm Snapdragon processors within the Accused Infringing Devices is also configured to communicate with a base station (“eNB”) in a licensed spectrum to determine availability of the service.



12 <https://www.qualcomm.com/documents/progress-laa-and-its-relationship-lte-u-and-multefire>

13 18. The front end module in the Accused Infringing Devices is further  
14 configured to initiate transfer of the service to the licensed spectrum associated with  
15 the base station if the first value of the mobility factor indicates that the subscriber  
16 station has been in a high mobility state for at least a predetermined period of time.  
17 For example, an Accused Infringing Device (“UE”) will trigger a measurement  
18 event that produces measurement results which, when processed by the base station  
19 (“eNB”), indicate that the UE is in a high mobility state, e.g., a UE’s measurement  
20 results may indicate fast signal fades or rapidly increasing (or decreasing) received  
21 power from a neighbor cell (or serving cell). The reporting of these measurements  
22 by the UE’s front end module will initiate a transfer of the service to the licensed  
23 spectrum. The UE will not report measurement results unless the UE has  
24 experienced conditions for triggering a measurement event for a predetermined  
25 period of time (referred to as the TimeToTrigger).  
26  
27  
28

#### 5.5.4.4 Event A3 (Neighbour becomes offset better than PCell/ PSCell)

The UE shall:

- 1> consider the entering condition for this event to be satisfied when condition A3-1, as specified below, is fulfilled;
- 1> consider the leaving condition for this event to be satisfied when condition A3-2, as specified below, is fulfilled;
- 1> if *usePSCell* of the corresponding *reportConfig* is set to *true*:
  - 2> use the PSCell for *Mp*, *Qfp* and *Ocp*;
- 1> else:
  - 2> use the PCell for *Mp*, *Qfp* and *Ocp*;

**NOTE** The cell(s) that triggers the event is on the frequency indicated in the associated *measObject* which may be different from the frequency used by the PCell/ PSCell.

*Mn* is the measurement result of the neighbouring cell, not taking into account any offsets.

*Mp* is the measurement result of the PCell/ PSCell, not taking into account any offsets.

[https://www.etsi.org/deliver/etsi\\_ts/136300\\_136399/136331/13.08.01\\_60/ts\\_136331v130801p.pdf](https://www.etsi.org/deliver/etsi_ts/136300_136399/136331/13.08.01_60/ts_136331v130801p.pdf)

#### – *TimeToTrigger*

The IE *TimeToTrigger* specifies the value range used for time to trigger parameter, which concerns the time during which specific criteria for the event needs to be met in order to trigger a measurement report. Value *ms0* corresponds to 0 ms and behaviour as specified in 7.3.2 applies, *ms40* corresponds to 40 ms, and so on.

#### *TimeToTrigger* information element

```
-- ASN1START
TimeToTrigger ::=
    ENUMERATED {
        ms0, ms40, ms64, ms80, ms100, ms128, ms160, ms256,
        ms320, ms480, ms512, ms640, ms1024, ms1280, ms2560,
        ms5120}
-- ASN1STOP
```

ETSI TS 136 331 V13.8.1 (2018-01) at 6.3.5 (p. 437)

[https://www.etsi.org/deliver/etsi\\_ts/136300\\_136399/136331/13.08.01\\_60/ts\\_136331v130801p.pdf](https://www.etsi.org/deliver/etsi_ts/136300_136399/136331/13.08.01_60/ts_136331v130801p.pdf)

### 5.5.4 Measurement report triggering

#### 5.5.4.1 General

If security has been activated successfully, the UE shall:

- 1> for each *measId* included in the *measIdList* within *VarMeasConfig*:
  - 2> if the *triggerType* is set to *event* and if the entry condition applicable for this event, i.e. the event corresponding with the *eventId* of the corresponding *reportConfig* within *VarMeasConfig*, is fulfilled for one or more applicable cells for all measurements after layer 3 filtering taken during *timeToTrigger* defined for this event within the *VarMeasConfig*, while the *VarMeasReportList* does not include a measurement reporting entry for this *measId* (a first cell triggers the event):

ETSI TS 136 331 V13.8.1 (2018-01)

1           19.     ASUS has thus infringed and continues to infringe at least claim 13 of  
2 the '637 patent by making, using, testing, selling, offering for sale, importing  
3 and/or licensing the Accused Infringing Devices.

4           20.     ASUS's acts of direct infringement have caused, and continue to  
5 cause, damage to CellTran, and CellTran is entitled to recover damages sustained as  
6 a result of ASUS's wrongful acts in an amount subject to proof at trial.

7                     **COUNT 2: INFRINGEMENT OF THE '713 PATENT**

8           21.     The allegations of paragraphs 1-7 of this Complaint are incorporated  
9 by reference as though fully set forth herein.

10          22.     CellTran owns by assignment the entire right, title, and interest in the  
11 '425 patent.

12          23.     The '425 patent was issued by the United States Patent and Trademark  
13 Office on February 6, 2018, and is titled "Methods and Apparatus for Performing  
14 Handoff Based on the Mobility of a Subscriber Station." A true and correct copy of  
15 the '425 patent is attached as Exhibit B.

16          24.     Upon information and belief, ASUS has infringed at least claim 7 of  
17 the '425 patent by making, using, testing, selling, offering for sale, importing  
18 and/or licensing in the United States licensed assisted access (LAA) mobile  
19 devices, including phones and laptops, including at least the ZenPro 4, ZenPhone  
20 5Z, and the NovaGo laptop (collectively the "Accused Infringing Devices") in an  
21 exemplary manner as described below.

22          25.     The Accused Infringing Devices are subscriber stations sometimes  
23 referred to as user equipment ("UE"), which support LTE-Advanced connectivity  
24 and LAA technology. For example, the ZenPhone 4 Pro and the NovaGo laptop  
25 use the Snapdragon 835 mobile platform, while the ZenPhone 5Z uses the  
26 Snapdragon 845 mobile platform. Both the Snapdragon 835 and the Snapdragon  
27 845 support LAA.  
28

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28

### ZenFone 4 Pro (ZS551KL)

#### Processor



**CPU:** Qualcomm® Snapdragon™ 835 Mobile Platform with 10nm, 64-bit Octa-core Processor  
FinFET LPP (Low Power Plus) powersaving technology

**GPU:** Qualcomm® Adreno™ 540

<https://www.asus.com/us/Phone/ZenFone-4-Pro-ZS551KL/Tech-Specs/>

### ZenFone 5Z

#### Processor



**CPU:** Qualcomm® Snapdragon™ 845 Mobile Platform with 10nm, 64-bit Octa-core Processor  
with AI Boost

FinFET LPP (Low Power Plus) powersaving technology

**GPU:** Qualcomm® Adreno™ 630

<https://www.asus.com/us/Phone/ZenFone-5Z-ZS620KL/Tech-Specs/>



### ASUS NovaGo TP370QL-6G128G Convertible Laptop with Gigabit LTE (Unlocked)

★★★★★ 11

- 13.3-inch Full HD display
- Qualcomm® Snapdragon™ 835 Mobile PC Platform
- 6GB memory/128GB eMMC

More

[https://www.microsoft.com/en-us/p/asus-novago-tp370ql-6g128g-convertible-laptop-with-gigabit-lte-unlocked/8z6d8jn7cgg9?icid=PC\\_cat\\_ACPC-ASUS-06042018&activetab=pivot:overviewtab](https://www.microsoft.com/en-us/p/asus-novago-tp370ql-6g128g-convertible-laptop-with-gigabit-lte-unlocked/8z6d8jn7cgg9?icid=PC_cat_ACPC-ASUS-06042018&activetab=pivot:overviewtab)

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28



Qualcomm | Products ▾ / Platforms ▾ / Snapdragon 835 Mobile Platform



## Snapdragon 835 Mobile Platform

With an advanced 10-nanometer design, the Qualcomm® Snapdragon™ 835 mobile platform can support phenomenal mobile performance. It is 35% smaller and uses 25% less power than previous designs, and is engineered to deliver exceptionally long battery life, lifelike VR and AR experiences, cutting-edge camera capabilities and Gigabit Class download speeds.

Qualcomm Snapdragon processors are a product of Qualcomm Technologies, Inc.

## Hardware and Software

[Compare Snapdragon 800 Series Mobile Platforms >](#)

<b>PROCESSOR</b>	<b>MSM8998</b>		
<b>CELLULAR MODEM</b>	<b>Qualcomm® Snapdragon™ X16 LTE modem</b>	<b>Peak Download Speed: 1 Gbps</b>	
		<b>Peak Upload Speed: 150 Mbps</b>	

<https://www.qualcomm.com/products/snapdragon/processors/835>

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28

## Cellular Modem

### Chipset

- Snapdragon X16 LTE Modem

### LTE Category

- LTE Category 16 (downlink)
- LTE Category 13 (uplink)

### Supported Cellular Technologies

- LTE FDD
- LTE TDD
- LAA
- LTE Broadcast
- WCDMA (DB-DC-HSDPA, DC-HSUPA)
- TD-SCDMA
- CDMA 1x
- EV-DO
- GSM/EDGE

<https://www.qualcomm.com/products/snapdragon/modems/4g-lte/x16>



# SDM845

Purpose-built for mobile, the SDM845 is ideal for premium mobile experiences. SDM845 supports new architectures for AI and immersive virtual reality, as well as gigabit LTE and a new security architecture.

## Cellular Modem

### Modem Name

- Qualcomm® Snapdragon™ X20 LTE modem

### Supported Cellular Technologies

- LTE FDD
- LTE TDD
- LAA
- LTE Broadcast
- WCDMA (DB-DC-HSDPA, DC-HSUPA)
- TD-SCDMA
- CDMA 1x
- EV-DO
- GSM/EDGE

<https://www.qualcomm.com/products/sdm845>

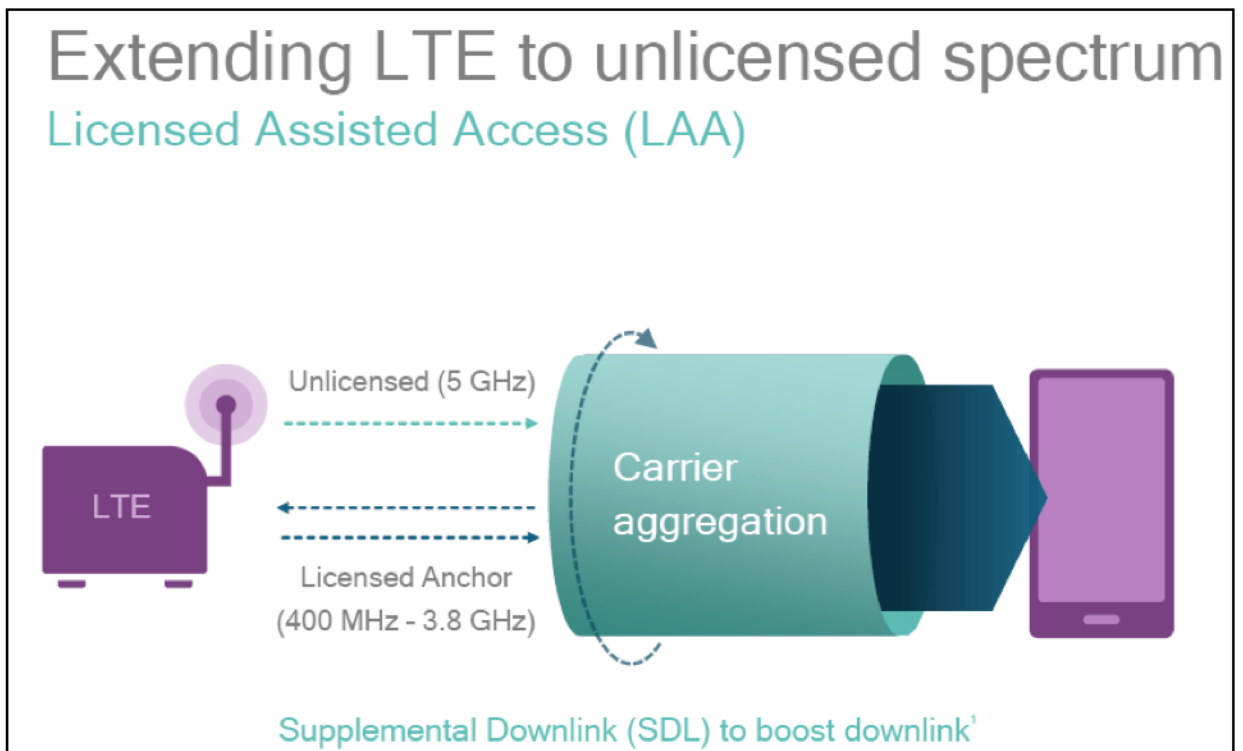
26. The Accused Infringing Devices contain a front end module configured to establish a service with a base station in a licensed spectrum and to transmit a message to the base station to determine availability of the service via a non-licensed (alternatively referred to as “unlicensed”) spectrum. For example, the Accused Infringing Devices contain front end components that convert information into radio signals that can be transmitted and received over the air.

1 **RFFE (RF Front-End):**

2 RF Front End (RFFE) refers to a set of mobile device components that convert  
3 information into radio signals that can be transmitted and received over the air. RFFE  
4 components work in conjunction with a device's modem and antenna.

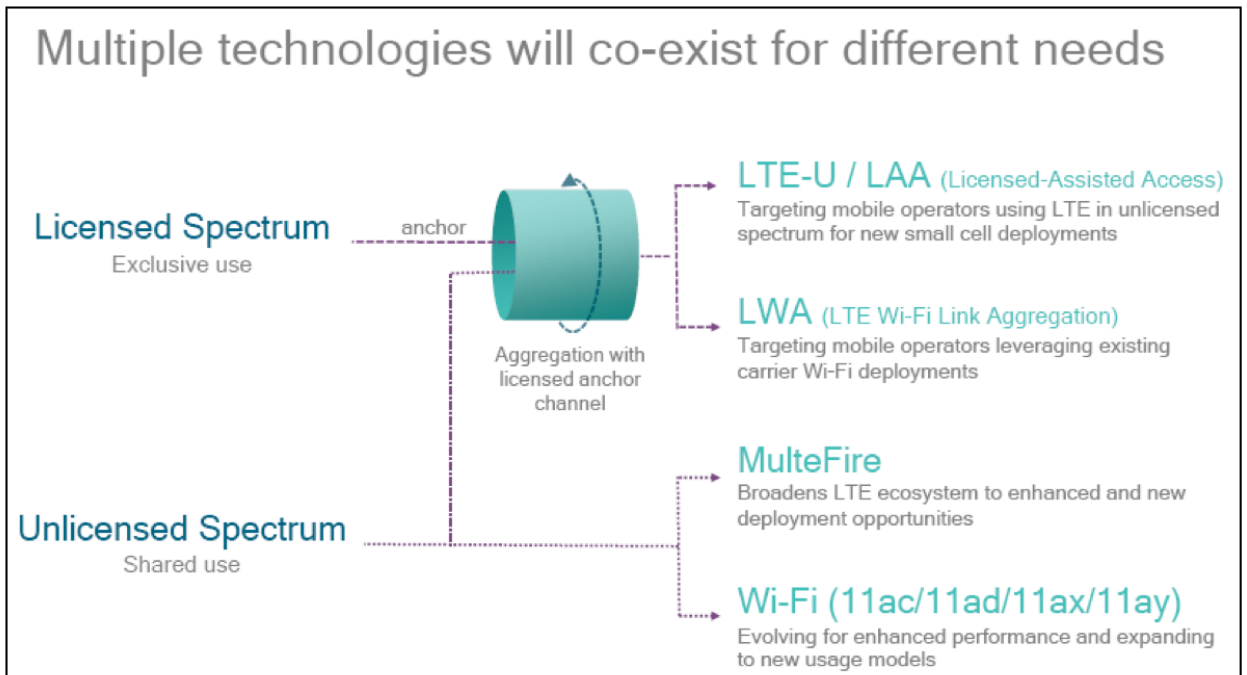
5 <https://www.qualcomm.com/news/onq/2017/02/23/mwc-2017-fundamentals-cheat-sheet>

6 27. Being LAA-enabled UE, the Accused Infringing Devices are  
7 configured to establish a service with a base station ("eNB") in a licensed spectrum  
8 and to transmit a message to the base station to determine availability of the service  
9 via a non-licensed spectrum.



22 <https://www.qualcomm.com/media/documents/files/laa-webinar-feb-2016.pdf>

23  
24  
25  
26  
27  
28



12 <https://www.qualcomm.com/documents/progress-laa-and-its-relationship-lte-u-and-multefire>

13 28. The Accused Infringing Devices contain a mobility monitoring  
14 module. For example, the Accused Infringing Devices include a mobility  
15 monitoring module within its cellular baseband processor, such as the Qualcomm  
16 Snapdragon x16 LTE modem.

17 <https://www.qualcomm.com/news/onq/2017/10/13/lg-v30-and-snapdragon-835-unite-premium-photography-security-and-mobile-vr>

18 29. The Accused Infringing Devices contain a mobility monitoring module  
19 configured to determine a first value of a mobility factor of the subscriber station  
20 wherein the mobility factor is determined from values of one or more metrics  
21 concerning communications between the base station and the subscriber station.  
22 For example, the Accused Infringing Devices will make radio resource  
23 management measurements representing values of one or more metrics that are  
24 reported to LTE LAA-enabled base stations.  
25

## 5.5 Measurements

### 5.5.1 Introduction

The UE reports measurement information in accordance with the measurement configuration as provided by E-UTRAN. E-UTRAN provides the measurement configuration applicable for a UE in RRC\_CONNECTED by means of dedicated signalling, i.e. using the *RRCConnectionReconfiguration* or *RRCConnectionResume* message.

The UE can be requested to perform the following types of measurements:

- Intra-frequency measurements: measurements at the downlink carrier frequency(ies) of the serving cell(s).
- Inter-frequency measurements: measurements at frequencies that differ from any of the downlink carrier frequency(ies) of the serving cell(s).
- Inter-RAT measurements of UTRA frequencies.
- Inter-RAT measurements of GERAN frequencies.
- Inter-RAT measurements of CDMA2000 HRPD or CDMA2000 1xRTT or WLAN frequencies.

ETSI TS 136 331 V13.8.1 (2018-01)

[https://www.etsi.org/deliver/etsi\\_ts/136300\\_136399/136331/13.08.01\\_60/ts\\_136331v130801p.pdf](https://www.etsi.org/deliver/etsi_ts/136300_136399/136331/13.08.01_60/ts_136331v130801p.pdf)

30. The Accused Infringing Devices use metrics including one or more of frequency offsets, correlations of known signals, and variation of received signal power. For example, the Accused Infringing Devices use metrics such as RSSI, RSPR, and RSRQ, which represent and/or provide one or more frequency offsets, correlations of known signals and variation of signal power.

6.3.6 Other information elements

- UE-EUTRA-Capability

The IE *UE-EUTRA-Capability* is used to convey the E-UTRA UE Radio Access Capability Parameters, see TS 36.306 [5], and the Feature Group Indicators for mandatory features (defined in Annexes B.1 and C.1) to the network. The IE *UE-EUTRA-Capability* is transferred in E-UTRA or in another RAT.

**crossCarrierSchedulingLAA-DL**

Indicates whether the UE supports cross-carrier scheduling from a licensed carrier for LAA cell(s) for downlink. This field can be included only if *downlinkLAA* is included.

**csi-RS-DRS-RRM-MeasurementsLAA**

Indicates whether the UE supports performing RRM measurements on LAA cell(s) based on CSI-RS-based DRS. This field can be included only if *downlinkLAA* is included.

**downlinkLAA**

Presence of the field indicates that the UE supports downlink LAA operation including identification of downlink transmissions on LAA cell(s) for full downlink subframes, decoding of common downlink control signalling on LAA cell(s), CSI feedback for LAA cell(s), RRM measurements on LAA cell(s) based on CRS-based DRS.

**rssi-AndChannelOccupancyReporting**

Indicates whether the UE supports performing measurements and reporting of RSSI and channel occupancy. This field can be included only if *downlinkLAA* is included.

ETSI TS 136 331 V13.8.1 (2018-01)

[https://www.etsi.org/deliver/etsi\\_ts/136300\\_136399/136331/13.08.01\\_60/ts\\_136331v130801p.pdf](https://www.etsi.org/deliver/etsi_ts/136300_136399/136331/13.08.01_60/ts_136331v130801p.pdf)

3GPP TS 36.214 version 13.5.0 Release 13 8 ETSI TS 136 214 V13.5.0 (2017-10)  
5.1.1 Reference Signal Received Power (RSRP)

Definition	Reference signal received power (RSRP) is defined as the linear average over the power contributions (in [W]) of the resource elements that carry cell-specific reference signals within the considered measurement frequency bandwidth. For RSRP determination the cell-specific reference signals $R_0$ according to TS 36.211 [3] shall be used. If the UE can reliably detect that $R_1$ is available it may use $R_1$ in addition to $R_0$ to determine RSRP.  If higher layers indicate measurements based on discovery signals, the UE shall measure RSRP in the subframes in the configured discovery signal occasions. For frame structure 1 and 2, if the UE can reliably detect that cell-specific reference signals are present in other subframes, the UE may use those subframes in addition to determine RSRP.  The reference point for the RSRP shall be the antenna connector of the UE.  If receiver diversity is in use by the UE, the reported value shall not be lower than the corresponding RSRP of any of the individual diversity branches.
Applicable for	RRC_IDLE intra-frequency, RRC_IDLE inter-frequency, RRC_CONNECTED intra-frequency, RRC_CONNECTED inter-frequency.
NOTE 1:	The number of resource elements within the considered measurement frequency bandwidth and within the measurement period that are used by the UE to determine RSRP is left up to the UE implementation with the limitation that corresponding measurement accuracy requirements have to be fulfilled.
NOTE 2:	The power per resource element is determined from the energy received during the useful part of the symbol, excluding the CP.

3GPP TS 36.214 version 13.5.0 Release 13 9 ETSI TS 136 214 V13.5.0 (2017-10)  
5.1.3 Reference Signal Received Quality (RSRQ)

Definition	Reference Signal Received Quality (RSRQ) is defined as the ratio $N \times \text{RSRP} / \text{E-UTRA carrier RSSI}$ , where $N$ is the number of RBs of the E-UTRA carrier RSSI measurement bandwidth. The measurements in the numerator and denominator shall be made over the same set of resource blocks.  E-UTRA Carrier Received Signal Strength Indicator (RSSI) comprises the linear average of the total received power (in [W]) observed only in certain OFDM symbols of measurement subframes, in the measurement bandwidth, over $N$ number of resource blocks by the UE from all sources, including co-channel serving and non-serving cells, adjacent channel interference, thermal noise etc.  Unless indicated otherwise by higher layers, RSSI is measured only from OFDM symbols containing reference symbols for antenna port 0 of measurement subframes. If higher layers indicate all OFDM symbols for performing RSRQ measurements, then RSSI is measured from all OFDM symbols of the DL part of measurement subframes. If higher layers indicate certain subframes for performing RSRQ measurements, then RSSI is measured from all OFDM symbols of the DL part of the indicated subframes.  If higher layers indicate measurements based on discovery signals, RSSI is measured from all OFDM symbols of the DL part of the subframes in the configured discovery signal occasions.  The reference point for the RSRQ shall be the antenna connector of the UE.  If receiver diversity is in use by the UE, the reported value shall not be lower than the corresponding RSRQ of any of the individual diversity branches.
Applicable for	RRC_IDLE intra-frequency, RRC_IDLE inter-frequency, RRC_CONNECTED intra-frequency, RRC_CONNECTED inter-frequency.

ETSI TS 136 214 V13.5.0 (2017-10)

[http://www.etsi.org/deliver/etsi\\_ts/136200\\_136299/136214/13.05.00\\_60/ts\\_136214v130500p](http://www.etsi.org/deliver/etsi_ts/136200_136299/136214/13.05.00_60/ts_136214v130500p)

31. The Accused Infringing Devices initiate transfer of the service from the licensed spectrum to the non-licensed spectrum associated with the base station

1 based on the first value of the mobility factor. For example, an Accused Infringing  
 2 Device (“UE”) can initiate transfer of the service from a licensed to non-licensed  
 3 spectrum via a measurement report triggering event. One such exemplary  
 4 triggering is Event A3, which specifies that a UE will initiate transfer if RRC  
 5 conditions for a neighbor cell (a Secondary Cell (“SCell”) on non-licensed  
 6 spectrum) become better than those of the Primary Cell (“PCell”) (on licensed  
 7 spectrum) to which the UE is presently camped.

#### 8 5.5.4 Measurement report triggering

##### 9 5.5.4.1 General

10 If security has been activated successfully, the UE shall:

11 1> for each *measId* included in the *measIdList* within *VarMeasConfig*:

12 2> if the *triggerType* is set to *event* and if the entry condition applicable for this event, i.e. the event  
 13 corresponding with the *eventId* of the corresponding *reportConfig* within *VarMeasConfig*, is fulfilled for one  
 14 or more applicable cells for all measurements after layer 3 filtering taken during *timeToTrigger* defined for  
 this event within the *VarMeasConfig*, while the *VarMeasReportList* does not include an measurement  
 reporting entry for this *measId* (a first cell triggers the event):

14 ETSI TS 136 331 V13.8.1 (2018-01)

15 32. ASUS has thus infringed and continues to infringe at least claim 7 of  
 16 the ’425 patent by making, using, testing, selling, offering for sale, importing  
 17 and/or licensing the Accused Infringing Devices.

18 33. ASUS’s acts of direct infringement have caused, and continue to  
 19 cause, damage to CellTran, and CellTran is entitled to recover damages sustained as  
 20 a result of ASUS’s wrongful acts in an amount subject to proof at trial.

### 21 **PRAYER FOR RELIEF**

22 WHEREFORE, CellTran, respectfully prays that the Court enter judgment in  
 23 its favor and against ASUS as follows:

- 24 A. A judgment that ASUS has infringed the ’637 patent;  
 25 B. A judgment that ASUS has infringed the ’425 patent;  
 26 C. A judgment that CellTran be awarded damages adequate to  
 27 compensate it for ASUS’s past infringement and any continuing or future  
 28

1 infringement of the '637 patent and the '425 patent, including pre-judgment and  
2 post-judgment interest costs and disbursements as justified under 35 U.S.C. § 284  
3 and an accounting;

4 D. That CellTran be granted its reasonable attorneys' fees in this action;

5 E. That this Court award CellTran its costs; and

6 F. That this Court award CellTran such other and further relief as the  
7 Court deems proper.

8 **DEMAND FOR JURY TRIAL**

9 Pursuant to Rule 38(b) of the Federal Rules of Civil Procedure, CellTran  
10 demands a trial by jury for all issues so triable.

11 Dated: September 7, 2018

By /s/ M. Elizabeth Day

12 M. Elizabeth Day (SBN 177125)  
13 eday@feinday.com  
14 FEINBERG DAY ALBERTI LIM &  
15 BELLOLI LLP  
16 1600 El Camino Real, Suite 280  
17 Menlo Park, CA 94025  
18 Telephone: 650 618-4360  
19 Facsimile: 650 618-4368

20 *Attorneys for Plaintiff*  
21 Cellular Transitions, LLC  
22  
23  
24  
25  
26  
27  
28