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1 Product Overview

This document describes the Baseband units for RBS 6000 systems.

1.1 Purpose

The Baseband units provide switching, traffic management, timing, baseband processing, and radio interfacing.

1.2 Variants

The Baseband variants are the following:

- Baseband 5212
- Baseband 5216

Baseband 5212 is supported from software L16A, W16A, and G16B.

Baseband 5216 is supported from software L15B, W16A, and G16B.

For information on supported configurations and capacity, refer to *RBS Configurations*.

1.3 Overview

This section provides an overview of the Baseband, as shown in Figure 1.
1.4 Warranty Seal

The unit is equipped with a warranty seal sticker.

Note: Seals that have been implemented by Ericsson are not to be broken or removed, as it otherwise voids warranty.
2 Function Description

The Baseband unit has the following functions:

- Timing function
- Loadable software
- Downlink baseband processing
- Uplink baseband processing
- IP traffic management
- Radio interface
- Transmission handling
- External synchronization
- Controlling power and climate of the RBS

For the block diagram of the Baseband unit, see Figure 2.

Figure 2 Baseband Block Diagram
3 Technical Data

Technical data for the Baseband is listed in Table 1, and Table 2.

For information about power consumption, see Power Consumption Guideline for RBS 6000.

Table 1  Dimensions and Weight

<table>
<thead>
<tr>
<th>Baseband</th>
<th>Height</th>
<th>Width</th>
<th>Depth</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseband 5216</td>
<td>350 mm</td>
<td>31 mm</td>
<td>280 mm</td>
<td>&lt; 4kg</td>
</tr>
<tr>
<td>Baseband 5212</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 2  Technical Data

<table>
<thead>
<tr>
<th>Baseband</th>
<th>Capacity Data LTE(^{(1)})</th>
<th>Capacity Data WCDMA(^{(4)})</th>
<th>Capacity Data GSM</th>
<th>Supported Radio Interface Connections CPRI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseband 5216</td>
<td>• 8000 connected users</td>
<td>1152 DL</td>
<td>48 TRX</td>
<td>2.5 Gbps, 4.9 Gbps(^{(1)}), 9.8 Gbps(^{(1)}), and 10.1 Gbps(^{(1)})</td>
</tr>
<tr>
<td></td>
<td>• 960 MHz antenna bandwidth(^{(3)})</td>
<td>768 UL, 1920 EUL</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Up to 2000 FDD or 1000 TDD VoIP users</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• 1200 Mbps DL throughput(^{(3)})</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• 600 Mbps UL throughput(^{(3)})</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baseband</td>
<td>Capacity Data LTE(^{(1)})</td>
<td>Capacity Data WCDMA(^{(1)})</td>
<td>Capacity Data GSM</td>
<td>Supported Radio Interface Connections CPRI</td>
</tr>
<tr>
<td>----------</td>
<td>-----------------------------</td>
<td>-------------------------------</td>
<td>-------------------</td>
<td>------------------------------------------</td>
</tr>
</tbody>
</table>
| Baseband 5212 | • 4000 connected users  
• 480 MHz antenna bandwidth\(^{(3)}\)  
• Up to 1200 FDD or 500 TDD VoIP users  
• 600 Mbps DL throughput\(^{(3)}\)  
• 300 Mbps UL throughput\(^{(3)}\) | 576 DL  
576 UL, 960 EUL | 24 TRX | 2.5 Gbps, 4.9 Gbps\(^{(1)}\), 9.8 Gbps\(^{(1)}\), and 10.1 Gbps\(^{(1)}\) |

\(^{(1)}\) Depending on the Software Package  
\(^{(2)}\) Dedicated Channel  
\(^{(3)}\) Depending on the Radio Configuration
4 Baseband Interfaces

The signalling and power interfaces for the Baseband units are listed in Table 3.

**Table 3  Baseband 5216 Interfaces**

<table>
<thead>
<tr>
<th>Marking</th>
<th>Connector</th>
<th>Description</th>
<th>Optical Indicator(1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>-48 V</td>
<td>ET20 A</td>
<td>-48 V DC Power</td>
<td>Yes</td>
</tr>
<tr>
<td>SYNC</td>
<td>RJ-45</td>
<td>The Baseband unit can receive synchronization from a synchronization interface, for example GPS, or over the transport network. External interface</td>
<td>Yes</td>
</tr>
<tr>
<td>EC</td>
<td>RJ-45</td>
<td>Enclosure Control Bus (ECB)</td>
<td>Yes</td>
</tr>
<tr>
<td>LMT(2)</td>
<td>RJ-45</td>
<td>Console and LMT Internal and external interfaces Sync test</td>
<td>Yes(3)</td>
</tr>
<tr>
<td>TN A(4)</td>
<td>RJ-45</td>
<td>100Mb/1Gb Ethernet transmission External interface, electrical</td>
<td>Yes</td>
</tr>
<tr>
<td>TN B(4)(5)</td>
<td>SFP+(6)</td>
<td>1/10 Gb Ethernet transmission External interface, electrical/optical</td>
<td>Yes</td>
</tr>
<tr>
<td>TN C(4)(5)</td>
<td>SFP+(6)</td>
<td>1/10 Gb Ethernet transmission External interface, electrical/optical</td>
<td>Yes</td>
</tr>
<tr>
<td>Marking</td>
<td>Connector</td>
<td>Description</td>
<td>Optical Indicator&lt;sup&gt;(1)&lt;/sup&gt;</td>
</tr>
<tr>
<td>---------</td>
<td>-----------</td>
<td>-------------</td>
<td>-------------------------------</td>
</tr>
<tr>
<td>!</td>
<td>-</td>
<td>Fault Optical indicator, red</td>
<td>Yes</td>
</tr>
<tr>
<td>✔️</td>
<td>-</td>
<td>Operation Optical indicator, green</td>
<td>Yes</td>
</tr>
</tbody>
</table>
| 🔄️     | -         | Maintenance Optical indicator, blue  
For information about the maintenance button, refer to *Indicators, Buttons, and Switches* | Yes                          |
| 🔔️     | -         | Status Optical indicator, yellow | Yes                          |
| IDL A   | Xcede     | Inter Digital Link ethernet (IDLe)  
Internal interface, Baseband to Baseband  
Combined IDLe and CPRI<sup>(7)</sup> | Yes                          |
| IDL B   | Xcede     | IDLe  
Internal interface, Baseband to Baseband  
Combined IDLe and CPRI<sup>(7)</sup> | Yes                          |
| ☁️ A - F| SFP+<sup>(8)</sup>  | Radio interface x 6  
Internal interface between Baseband and Radio Unit (RU), electrical  
External interface between Baseband and Remote Radio Unit (RRU), optical | Yes                          |
(1) For more information about optical indicators, refer to Indicators, Buttons, and Switches.
(2) The LMT port has combined LMT A and LMT B functionality. The LMT port is configured as LMT B by default. An LMT splitter cable is used to access LMT A. For detailed information, see Connect Client.
(3) The optical indicator is only in use when the LMT port is used as LMT B.
(4) Hardware Activation Codes are required for use of multiple TN ports simultaneously.
(5) Hardware Activation Codes are required for use of 10Gb transmission.
(6) SFP+ is needed for transmission rates higher than 2.5 Gbps.
(7) The IDLe Xcede connection also supports the CPRI interface.
(8) SFP+ is needed for CPRI rates higher than 2.5 Gbps.

Table 4 Baseband 5212 Interfaces

<table>
<thead>
<tr>
<th>Marking</th>
<th>Connector</th>
<th>Description</th>
<th>Optical Indicator(4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>-48 V</td>
<td>ET20 A</td>
<td>-48 V DC Power</td>
<td>Yes</td>
</tr>
<tr>
<td>SYNC</td>
<td>RJ-45</td>
<td>The Baseband unit can receive synchronization from a synchronization interface, for example GPS, or over the transport network. External interface</td>
<td>Yes</td>
</tr>
<tr>
<td>EC</td>
<td>RJ-45</td>
<td>Enclosure Control Bus (ECB) Internal interface</td>
<td>Yes</td>
</tr>
<tr>
<td>LMT(2)</td>
<td>RJ-45</td>
<td>Console and LMT Internal and external interfaces Sync test</td>
<td>Yes(3)</td>
</tr>
<tr>
<td>TN A(4)</td>
<td>RJ-45</td>
<td>100Mb/1Gb Ethernet transmission External interface, electrical</td>
<td>Yes</td>
</tr>
<tr>
<td>TN B(4)(5)</td>
<td>SFP+(6)</td>
<td>1/10 Gb Ethernet transmission External interface, electrical/optical</td>
<td>Yes</td>
</tr>
<tr>
<td>Marking</td>
<td>Connector</td>
<td>Description</td>
<td>Optical Indicator&lt;sup&gt;(1)&lt;/sup&gt;</td>
</tr>
<tr>
<td>---------</td>
<td>-----------</td>
<td>--------------------------------------------------</td>
<td>----------------------------------</td>
</tr>
</tbody>
</table>
| TN C<sup>(4)</sup> | SFP+<sup>(6)</sup> | 1 Gb Ethernet transmission  
External interface, electrical/optical | Yes |
| !       | -         | Fault  
Optical indicator, red                          | Yes |
| ✓       | -         | Operation  
Optical indicator, green                         | Yes |
| 🚫      | -         | Maintenance  
Optical indicator, yellow  
Optical indicator, blue                          | Yes |
| ⏼      | -         | Maintenance button  
For information about the maintenance button, refer to Indicators, Buttons, and Switches | Yes |
| ⚪️      | -         | Status  
Optical indicator, yellow                         | Yes |
| IDL A   | Xcede     | IDLe  
Internal interface, Baseband to Baseband  
Combined IDLe and CPRI<sup>(7)</sup> | Yes |
| IDL B   | Xcede     | IDLe  
Internal interface, Baseband to Baseband  
Combined IDLe and CPRI<sup>(7)</sup> | Yes |
<table>
<thead>
<tr>
<th>Marking</th>
<th>Connector</th>
<th>Description</th>
<th>Optical Indicator(1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>⊕ A - F</td>
<td>SFP+(8)</td>
<td>Radio interface x 6 &lt;br&gt;Internal interface between Baseband and Radio Unit (RU), electrical &lt;br&gt;External interface between Baseband and Remote Radio Unit (RRU), optical</td>
<td>Yes</td>
</tr>
</tbody>
</table>

(1) For more information about Optical indicators, refer to Indicators, Buttons, and Switches
(2) The LMT port has combined LMT A and LMT B functionality. The LMT port is configured as LMT B by default. An LMT splitter cable is used to access LMT A. For detailed information, see Connect Client.
(3) The optical indicator is only in use when the LMT port is used as LMT B.
(4) Hardware Activation Codes are required for use of multiple TN ports simultaneously
(5) Hardware Activation Codes are required for use of 10Gb transmission
(6) SFP+ is needed for transmission rates higher than 2.5 Gbps.
(7) The IDLe Xcede connection also supports the CPRI interface.
(8) SFP+ is needed for CPRI rates higher than 2.5 Gbps.