**CDMA2000® in the 450 - 470 MHz Band**

An Affordable Rural Telecommunications Solution

Industry Leading Voice Capacity, Extended Coverage, and Broadband Connectivity

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### 115 Commercial Operators in 60 Countries

**15 Operators in 13 Countries Scheduled to Deploy in the Next Year**

<table>
<thead>
<tr>
<th>Region</th>
<th>Operators</th>
<th>Networks to be deployed</th>
</tr>
</thead>
</table>
| **Asia — Pacific** | 26 Commercial Operators in 17 countries  
3 Operators to deploy in 3 countries  
26 Commercial 1X networks  
3 1X networks to be deployed  
6 Commercial 1xEV-DO Rel. 0 networks  
4 1xEV-DO Rel. 0 networks to be deployed  
8 Commercial 1xEV-DO Rev. A networks  
1 1xEV-DO Rev. A networks to be deployed |
| **Caribbean — Latin America** | 15 Commercial Operators in 8 countries  
6 Operators to deploy in 3 countries  
15 Commercial 1X networks  
6 1X networks to be deployed  
1 Commercial 1xEV-DO Rel. 0 networks  
1 1xEV-DO Rel. 0 networks to be deployed  
2 Commercial 1xEV-DO Rev. A networks  
4 1xEV-DO Rev. A networks to be deployed |
| **Europe — Russia** | 51 Commercial Operators in 14 countries  
4 Operators to deploy in 4 countries  
43 Commercial 1X networks  
5 1X networks to be deployed  
36 Commercial 1xEV-DO Rel. 0 networks  
2 1xEV-DO Rel. 0 networks to be deployed  
44 Commercial 1xEV-DO Rev. A networks  
3 1xEV-DO Rev. A networks to be deployed  
36 Commercial EV-DO Rev. B networks  
3 EV-DO Rev. B networks to be deployed  
3 EV-DO Rev. B networks to be deployed  
3 EV-DO Rev. B networks to be deployed  
3 EV-DO Rev. B networks to be deployed  
3 EV-DO Rev. B networks to be deployed  
3 EV-DO Rev. B networks to be deployed  
3 EV-DO Rev. B networks to be deployed  
3 EV-DO Rev. B networks to be deployed  
3 EV-DO Rev. B networks to be deployed  
3 EV-DO Rev. B networks to be deployed  
3 EV-DO Rev. B networks to be deployed |
| **Africa — Middle East** | 23 Commercial Operators in 21 countries  
2 Operators to deploy in 2 countries  
23 Commercial 1X networks  
3 1X networks to be deployed  
7 Commercial 1xEV-DO Rel. 0 networks  
6 1xEV-DO Rel. 0 networks to be deployed  
4 Commercial 1xEV-DO Rev. A networks  
6 1xEV-DO Rev. A networks to be deployed |
### CDMA450 Market Facts

**December 2013**

**CDMA450 Delivers a Multitude of 3G Services**

Telephony, VoIP, Broadband Internet Access, Push-to-Talk, Position Location, Multimedia Messaging, Television, Telemedicine, Remote Learning, Public Safety, Enterprise Productivity and other Value Added Services

<table>
<thead>
<tr>
<th>CDMA2000 1X (1.25 MHz Channel)</th>
<th>1xEV-DO Rel. 0 (1.25 MHz Channel)</th>
<th>1xEV-DO Rev. A (1.25 MHz Channel)</th>
<th>Multicarrier EV-DO (5 MHz Channel)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peak</td>
<td>Peak</td>
<td>Peak</td>
<td>Peak</td>
</tr>
<tr>
<td>153 kbps (DL)</td>
<td>2.4 Mbps (DL)</td>
<td>3.1 Mbps (DL)</td>
<td>9.3 Mbps (DL)</td>
</tr>
<tr>
<td>153 kbps (UL)</td>
<td>153 kbps (UL)</td>
<td>1.8 Mbps (UL)</td>
<td>5.4 Mbps (UL)</td>
</tr>
<tr>
<td>Average User Data Rates</td>
<td>Average User Data Rates</td>
<td>Average User Data Rates</td>
<td>Average User Data Rates</td>
</tr>
<tr>
<td>60 - 100 kbps</td>
<td>300 - 700 kbps (DL)</td>
<td>600 - 1400 kbps (DL)</td>
<td>1.8 - 4.2 Mbps (DL)</td>
</tr>
<tr>
<td></td>
<td>70 - 90 kbps (UL)</td>
<td>500 - 800 kbps (UL)</td>
<td>1.5 - 2.4 Mbps (UL)</td>
</tr>
</tbody>
</table>

**198 CDMA450 Devices Available by 32 Suppliers**

- 125 CDMA2000 1X
- 21 CDMA2000 1xEV-DO Rel. 0
- 45 CDMA2000 1xEV-DO Rev. A
- 7 EV-DO Rev. B
- 9 WorldMode from 5 suppliers

**CDMA2000 Leads in 3G/Broadband Deployments**

**Global Presence**
- 335 operators have selected CDMA in 124 countries
- 60 GSM operators have deployed CDMA2000

**Technology of Choice for Emerging Markets**
- 137 WLL networks — The defacto global standard
- 115 CDMA450 operators in over 60 countries — Rapid adoption
- 71 operators in the Middle East and Africa — Meeting emerging market needs

**Large Ecosystem**
- 3,340 3G devices from 173 suppliers
- 26 infrastructure and test equipment vendors
- 100’s of investors, application developers, VAS suppliers, etc.

**Strong Value Proposition**
- Lower total cost of ownership (TCO)
- IP-based infrastructure — Interoperable with 4G solutions
- Sub-US$25 handsets — Price competitive with GSM
- Operators are making money at low ARPU levels — Sub-US$8 ARPU

[www.cdg.org](http://www.cdg.org)