

# Tsunami™ GX800

Modulation, Channel Width, Threshold Matrix

| Modulation              | BW (MHz) | SN (dB) | Threshold (dBm) | Capacity (Mbps) | Emission Designator |
|-------------------------|----------|---------|-----------------|-----------------|---------------------|
| <b>ETSI Modulations</b> |          |         |                 |                 |                     |
| QPSK                    | 7        | 8,2     | -94,4           | 8,97            | 7M00D1D             |
| QPSK                    | 7        | 9,8     | -92,3           | 10,26           | 7M00D1D             |
| 16QAM                   | 7        | 16,0    | -86,4           | 20,64           | 7M00D1D             |
| 16QAM                   | 7        | 17,0    | -85,4           | 22,15           | 7M00D1D             |
| 32QAM                   | 7        | 18,9    | -83,3           | 26,06           | 7M00D1D             |
| 32QAM                   | 7        | 19,7    | -82,4           | 27,71           | 7M00D1D             |
| 64QAM                   | 7        | 21,9    | -80,1           | 31,02           | 7M00D1D             |
| 64QAM                   | 7        | 23,0    | -78,9           | 33,28           | 7M00D1D             |
| QPSK                    | 14       | 8,3     | -91,1           | 18,74           | 14M0D1D             |
| QPSK                    | 14       | 9,6     | -89,2           | 21,64           | 14M0D1D             |
| 16QAM                   | 14       | 16,0    | -83,7           | 40,05           | 14M0D1D             |
| 16QAM                   | 14       | 16,9    | -82,6           | 42,98           | 14M0D1D             |
| 32QAM                   | 14       | 18,7    | -80,6           | 50,10           | 14M0D1D             |
| 32QAM                   | 14       | 19,9    | -79,3           | 53,75           | 14M0D1D             |
| 64QAM                   | 14       | 22,0    | -77,2           | 60,14           | 14M0D1D             |
| 64QAM                   | 14       | 23,0    | -75,9           | 64,52           | 14M0D1D             |
| 128QAM                  | 14       | 25,9    | -72,1           | 75,30           | 14M0D1D             |
| 128QAM                  | 14       | 26,2    | -71,8           | 76,57           | 14M0D1D             |
| QPSK                    | 28       | 9,7     | -86,3           | 38,88           | 28M0D1D             |
| QPSK                    | 28       | 10,6    | -85,1           | 44,23           | 28M0D1D             |
| 16QAM                   | 28       | 14,4    | -82,6           | 73,10           | 28M0D1D             |
| 16QAM                   | 28       | 16,3    | -80,0           | 85,57           | 28M0D1D             |
| 32QAM                   | 28       | 19,0    | -77,2           | 104,18          | 28M0D1D             |
| 32QAM                   | 28       | 19,9    | -76,2           | 110,76          | 28M0D1D             |
| 64QAM                   | 28       | 21,0    | -75,3           | 128,55          | 28M0D1D             |
| 64QAM                   | 28       | 23,2    | -72,9           | 134,06          | 28M0D1D             |
| 128QAM                  | 28       | 23,6    | -73,0           | 134,25          | 28M0D1D             |
| 128QAM                  | 28       | 25,8    | -70,1           | 156,99          | 28M0D1D             |
| 256QAM                  | 28       | 27,9    | -67,8           | 168,78          | 28M0D1D             |
| 256QAM                  | 28       | 28,9    | -66,5           | 179,43          | 28M0D1D             |
| QPSK                    | 40       | 10,9    | -83,5           | 55,75           | 40M0D1D             |
| QPSK                    | 40       | 10,9    | -83,5           | 60,83           | 40M0D1D             |
| 16QAM                   | 40       | 16,0    | -79,1           | 111,62          | 40M0D1D             |
| 16QAM                   | 40       | 17,3    | -77,7           | 121,78          | 40M0D1D             |
| 32QAM                   | 40       | 17,4    | -77,7           | 137,02          | 40M0D1D             |
| 32QAM                   | 40       | 20,3    | -74,5           | 152,26          | 40M0D1D             |
| 64QAM                   | 40       | 20,7    | -74,5           | 167,49          | 40M0D1D             |
| 64QAM                   | 40       | 23,4    | -71,4           | 182,73          | 40M0D1D             |
| 128QAM                  | 40       | 23,6    | -71,4           | 197,97          | 40M0D1D             |
| 128QAM                  | 40       | 25,8    | -68,9           | 209,65          | 40M0D1D             |
| 256QAM                  | 40       | 27,9    | -66,5           | 225,40          | 40M0D1D             |
| 256QAM                  | 40       | 28,9    | -65,2           | 239,62          | 40M0D1D             |
| QPSK                    | 56       | 9,7     | -83,5           | 77,20           | 56M0D1D             |
| QPSK                    | 56       | 10,6    | -82,5           | 82,82           | 56M0D1D             |
| 16QAM                   | 56       | 15,9    | -77,8           | 154,51          | 56M0D1D             |
| 16QAM                   | 56       | 17,3    | -76,2           | 168,56          | 56M0D1D             |
| 32QAM                   | 56       | 17,4    | -76,2           | 189,65          | 56M0D1D             |
| 32QAM                   | 56       | 20,3    | -72,9           | 210,73          | 56M0D1D             |
| 64QAM                   | 56       | 20,6    | -73,0           | 231,82          | 56M0D1D             |
| 64QAM                   | 56       | 23,2    | -70,0           | 252,90          | 56M0D1D             |
| 128QAM                  | 56       | 23,7    | -69,8           | 273,99          | 56M0D1D             |
| 128QAM                  | 56       | 27,0    | -66,0           | 299,99          | 56M0D1D             |
| 256QAM                  | 56       | 27,8    | -64,8           | 310,65          | 56M0D1D             |

| Modulation       | BW (MHz) | SN (dB) | Threshold (dBm) | Capacity (Mbps) | Emission Designator |
|------------------|----------|---------|-----------------|-----------------|---------------------|
| ANSI Modulations |          |         |                 |                 |                     |
| QPSK             | 10       | 9,6     | -91,2           | 14,28           | 10M0D1D             |
| QPSK             | 10       | 10,5    | -90,2           | 15,33           | 10M0D1D             |
| 16QAM            | 10       | 16,1    | -85,0           | 28,94           | 10M0D1D             |
| 16QAM            | 10       | 16,9    | -84,0           | 30,77           | 10M0D1D             |
| 32QAM            | 10       | 19,0    | -81,8           | 36,20           | 10M0D1D             |
| 32QAM            | 10       | 19,8    | -80,8           | 38,49           | 10M0D1D             |
| 64QAM            | 10       | 22,0    | -78,5           | 43,46           | 10M0D1D             |
| 64QAM            | 10       | 22,9    | -77,5           | 46,21           | 10M0D1D             |
| QPSK             | 20       | 9,6     | -87,8           | 29,51           | 20M0D1D             |
| QPSK             | 20       | 10,6    | -86,8           | 31,66           | 20M0D1D             |
| 16QAM            | 20       | 15,9    | -81,9           | 59,14           | 20M0D1D             |
| 16QAM            | 20       | 16,9    | -81,0           | 63,44           | 20M0D1D             |
| 32QAM            | 20       | 18,9    | -78,9           | 73,95           | 20M0D1D             |
| 32QAM            | 20       | 19,9    | -77,8           | 79,33           | 20M0D1D             |
| 64QAM            | 20       | 21,9    | -75,8           | 88,76           | 20M0D1D             |
| 64QAM            | 20       | 22,9    | -74,7           | 95,22           | 20M0D1D             |
| 128QAM           | 20       | 24,7    | -72,9           | 103,57          | 20M0D1D             |
| 128QAM           | 20       | 25,8    | -71,7           | 111,11          | 20M0D1D             |
| 256QAM           | 20       | 27,8    | -69,4           | 118,39          | 20M0D1D             |
| 256QAM           | 20       | 28,7    | -68,2           | 127,00          | 20M0D1D             |
| QPSK             | 30       | 9,6     | -85,8           | 44,57           | 30M0D1D             |
| QPSK             | 30       | 10,6    | -84,8           | 47,82           | 30M0D1D             |
| 16QAM            | 30       | 16,0    | -80,0           | 90,08           | 30M0D1D             |
| 16QAM            | 30       | 17,0    | -79,0           | 95,76           | 30M0D1D             |
| 32QAM            | 30       | 19,0    | -76,9           | 112,62          | 30M0D1D             |
| 32QAM            | 30       | 19,8    | -76,0           | 119,73          | 30M0D1D             |
| 64QAM            | 30       | 22,1    | -73,8           | 135,17          | 30M0D1D             |
| 64QAM            | 30       | 23,2    | -72,5           | 144,92          | 30M0D1D             |
| 128QAM           | 30       | 24,7    | -71,0           | 156,30          | 30M0D1D             |
| 128QAM           | 30       | 25,7    | -69,8           | 167,67          | 30M0D1D             |
| 256QAM           | 30       | 27,8    | -67,6           | 180,27          | 30M0D1D             |
| 256QAM           | 30       | 28,9    | -66,1           | 191,64          | 30M0D1D             |
| QPSK             | 40       | 10,9    | -83,5           | 55,75           | 40M0D1D             |
| QPSK             | 40       | 10,9    | -83,5           | 60,83           | 40M0D1D             |
| 16QAM            | 40       | 16,0    | -79,1           | 111,62          | 40M0D1D             |
| 16QAM            | 40       | 17,3    | -77,7           | 121,78          | 40M0D1D             |
| 32QAM            | 40       | 17,4    | -77,7           | 137,02          | 40M0D1D             |
| 32QAM            | 40       | 20,3    | -74,5           | 152,26          | 40M0D1D             |
| 64QAM            | 40       | 20,7    | -74,5           | 167,49          | 40M0D1D             |
| 64QAM            | 40       | 23,4    | -71,4           | 182,73          | 40M0D1D             |
| 128QAM           | 40       | 23,6    | -71,4           | 197,97          | 40M0D1D             |
| 128QAM           | 40       | 25,8    | -68,9           | 209,65          | 40M0D1D             |
| 256QAM           | 40       | 27,9    | -66,5           | 225,40          | 40M0D1D             |
| 256QAM           | 40       | 28,9    | -65,2           | 239,62          | 40M0D1D             |
| QPSK             | 50       | 9,8     | -83,4           | 73,70           | 50M0D1D             |
| QPSK             | 50       | 10,7    | -82,4           | 79,07           | 50M0D1D             |
| 16QAM            | 50       | 16,0    | -77,9           | 147,51          | 50M0D1D             |
| 16QAM            | 50       | 16,9    | -76,9           | 158,25          | 50M0D1D             |
| 32QAM            | 50       | 18,8    | -74,9           | 184,42          | 50M0D1D             |
| 32QAM            | 50       | 19,9    | -73,6           | 197,84          | 50M0D1D             |
| 64QAM            | 50       | 22,0    | -71,7           | 221,32          | 50M0D1D             |
| 64QAM            | 50       | 22,9    | -70,7           | 237,43          | 50M0D1D             |
| 128QAM           | 50       | 24,8    | -68,7           | 258,23          | 50M0D1D             |
| 128QAM           | 50       | 25,8    | -67,5           | 277,02          | 50M0D1D             |
| 256QAM           | 50       | 27,7    | -65,6           | 295,13          | 50M0D1D             |
| 256QAM           | 50       | 28,6    | -64,4           | 311,24          | 50M0D1D             |

# Tsunami™ GX800

## Transmit Power Matrix

| Freq (GHz) | QPSK  | QPSK2 | 16QAM | 16QAM2 | 32QAM | 32QAM2 | 64QAM | 64QAM2 | 128QAM | 128QAM2 | 256QAM | 256QAM2 |
|------------|-------|-------|-------|--------|-------|--------|-------|--------|--------|---------|--------|---------|
| 6.00       | 26.50 | 26.50 | 24.00 | 24.00  | 24.00 | 24.00  | 23.00 | 23.00  | 23.00  | 23.00   | 21.00  | 21.00   |
| 6.00       | 26.50 | 26.50 | 24.00 | 24.00  | 24.00 | 24.00  | 23.00 | 23.00  | 23.00  | 23.00   | 21.00  | 21.00   |
| 7.00       | 25.50 | 25.50 | 21.50 | 21.50  | 21.50 | 21.50  | 18.50 | 18.50  | 18.50  | 18.50   | 16.50  | 16.50   |
| 8.00       | 25.50 | 25.50 | 21.50 | 21.50  | 21.50 | 21.50  | 18.50 | 18.50  | 18.50  | 18.50   | 16.50  | 16.50   |
| 11.00      | 24.50 | 24.50 | 20.50 | 20.50  | 20.50 | 20.50  | 17.50 | 17.50  | 17.50  | 17.50   | 15.50  | 15.50   |
| 13.00      | 24.50 | 24.50 | 20.00 | 20.00  | 20.00 | 20.00  | 17.50 | 17.50  | 17.50  | 17.50   | 15.50  | 15.50   |
| 15.00      | 24.50 | 24.50 | 20.00 | 20.00  | 20.00 | 20.00  | 17.50 | 17.50  | 17.50  | 17.50   | 15.50  | 15.50   |
| 18.00      | 22.50 | 22.50 | 19.00 | 19.00  | 19.00 | 19.00  | 17.00 | 17.00  | 17.00  | 17.00   | 15.00  | 15.00   |
| 23.00      | 22.50 | 22.50 | 19.00 | 19.00  | 19.00 | 19.00  | 16.00 | 16.00  | 16.00  | 16.00   | 14.00  | 14.00   |
| 26.00      | 23.50 | 23.50 | 19.50 | 19.50  | 19.50 | 19.50  | 15.50 | 15.50  | 15.50  | 15.50   | 13.50  | 13.50   |

|      |                                    |
|------|------------------------------------|
| ATPC | Adjusts across entire manual range |
|      | Increases 1dB per second           |
|      | decreases .25dB per Second         |