

M22 Narrow-band COFDM Modulator

The M22 module implements Videsco's proprietary 2MHz bandwidth COFDM system, intended for use when bandwidth is scarce. Its low power consumption makes it ideal for use in both portable and fixed equipment. Its output is designed to interface to an external quadrature modulator / upconverter and it also directly interfaces to and controls Videsco's ES21 MPEG2 encoder.

This module is not available for use in military or police applications.

COFDM System

Standard: Videsco proprietary.
Nominal bandwidth: 2MHz.
Bitrate: standard mode 2Mbit/s ,
robust mode 1Mbit/s.
FFT size: 256 point.
Forward Error Correction: 3D Turbo
Product Code.

Input interface

8 bit parallel transport stream
interface.

Outputs

One or optionally two differential
analogue I and Q outputs designed
to drive a direct conversion to RF
quadrature modulator.

Output impedance: 200 Ohm.
Signal level – approx 1V peak to
peak.

The optional second output allows
the implementation of Orthogonal
Spatial Diversity (OSD). In this mode
as well as the modulation on
individual carriers being mutually
orthogonal, so are the signals
radiated from two antennas. This
gives substantial protection from 'flat
fading' – the main mode of failure of
a COFDM system due to reflections
from nearby objects.

Serial Control/Status interface

RS232, 38.4K baud, 8bits, 1 stop bit, no
parity.

Scrambling

Proprietary 32 bit fixed key system.

Note that this system is intended to
prevent casual interception of signals by
other users of this equipment. It is not
designed to offer a high degree of
cryptographic security.

Power

Input voltage 6 to 35V.
Power consumption 2-3W, depending on
options.

The board can also supply 5V, 3.3V, 1.8V
and 1.2V to other boards.

Connectors

Digital I/O / power connectors: 0.1 inch
box headers:
TS in – 26 way, coder control / power out
26 way, power in 10 way.

Analogue output connector: 25 way
screened D-type.

Dimensions

Board size: 100mm x 80mm