TDS3UAM

Universal Application Module for Tektronix TDS3000 Series Oscilloscopes

Newer versions of the Tektronix firmware for TDS3000 oscilloscopes provide the TDS3FFT and TDS3TRG functionality by default. There are other features available which are enabled by plug-in modules;

TDS3AAM Provides useful waveform math functions. TDS3VID Video line triggering.

TDS3LIM Limit test waveforms with user created masks. TDS3TMT Mask testing for some standard telecoms signals.

Each of these modules contains one 256 byte I2C EEPROM with a null terminated string “TDS3xxx” starting at address 0x04 to enable the corresponding features. By using a 1Kbyte or larger EEPROM all features can be enabled using just one physical module. EEPROMs larger than 2Kbytes have an additional address byte and are not compatible.

:10000000FFFFFFFF5444533341414D00FFFFFFFF0B

:10005000FFFFFFFF76312E303000FFFFFFFFFFFF75

:10010000FFFFFFFF544453334C494D00FFFFFFFFF7

:10015000FFFFFFFF76312E303000FFFFFFFFFFFF74

:10020000FFFFFFFF54445333544D5400FFFFFFFFE3

:10025000FFFFFFFF76312E303000FFFFFFFFFFFF73

:10030000FFFFFFFF5444533356494400FFFFFFFFF4

:10035000FFFFFFFF76312E303000FFFFFFFFFFFF72

:00000001FF

Intel Hex File “TDS3UAM.hex” The suggested parts to make a TDS3UAM are;

Tektronix TDS3000 Dummy/Empty Module Sim-Card Connector (e.g. Nokia 1110 type) 24C16 EEPROM SOIC8 5V

Blob of Blu-Tack

The 24C16 EEPROM has more memory than is actually required but has a useful feature – pins 1, 2 & 3 are not connected which makes soldering it to the SIM connector a little easier.

Procedure

1. Erase the EEPROM then program it with the Intel Hex file given above. To create the hex file, simply copy and paste everything inside the box above to a new text file named “TDS3UAM.hex”.
2. Lay the EEPROM upside down on the solder side of the SIM connector
3. Make the connections shown in the following pictures. Only one jumper wire is needed, all other connections can be done with solder bridges. It seems to work fine without a supply de-coupling capacitor fitted.
4. Assemble the EEPROM and SIM connector into the empty module at the position shown.
5. Plug it in to the scope and check the features are enabled.

 





 