

TDM 113558 Boards

Access Point Programmer Integrated Circuit

Main features

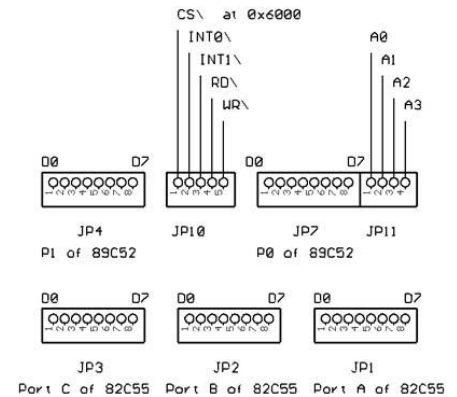
- Programming Capability: Access Points, Routers, PtP Links.
- Transmission capacity up to 165 Mbit/s full duplex (330 aggregated)
- Modulation Scheme 16, 32, 64, 128, 256, 512 and 1024 QAM
- Channel bandwidth 7, 10, 14, 18, 20MHz
- Compatible with Verilog and VHDL.
- Hitless adaptive coding and modulation (ACM)
- Xilinx SoC + Altera FPGA supported.

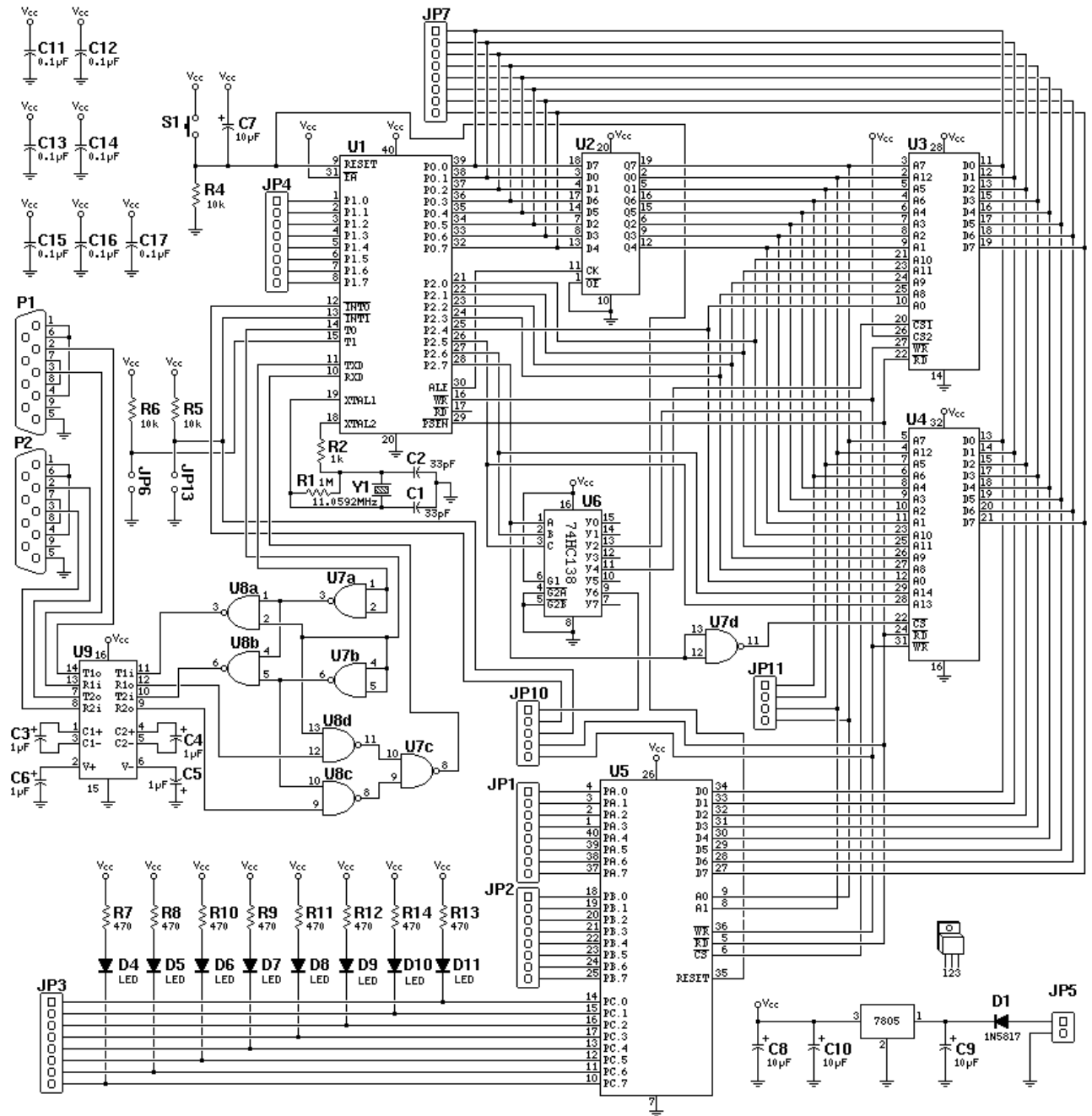
Description

TDM 113558 Programmer Boards are compact, easy to deploy and cost effective programmer board suitable for both access point and router links. Reconfigurable radio frequency (RF) system has recently emerged as a promising solution to cope with multiple communication standards and high spectrum density. We propose a novel optimization framework to efficiently program a reconfigurable RF system. In particular, two novel techniques, including (i) search space reduction by adaptive resolution and (ii) global polynomial optimization based on branch and bound, are developed. When combined with a relaxation iteration scheme, our proposed method offers superior performance when programming a large-scale reconfigurable RF system designed for the WLAN 802.11g standard. It can be used for Verilog and VHDL, for delivery of Data Buad to the Amplifiers. 113558 boards have option MP covers the 24050-24250 GHz frequency bands programming. Common hardware platform supports several combinations of Ethernet network interfaces – 1-2 metallic Ethernet 100Base-T and 1 fiber optical Ethernet interface (SM, MM or WDM industrial module).

TDM 113558 Boards incorporates powerful Trellis Coded Modulation with Concatenated Reed-Solomon error correction to ensure low residual BER. Those offer high coding gain and require lower signal to noise ratio. TDM A11. has built-in BERT for remote link diagnostics. Network management system (both in band or out of band possibility) can be connected via Ethernet channel or serial RS-232 channel.

ASD software, SNMP v. 1 and WEB interface may be used for setup, maintenance and diagnostics of AL..F radio relay link. QinQ and Quality of Service (QoS) configuration assigning priority queue based on the port packet arrived to, the priority tag field, the TOS field and the DS field are provided in the Programmer board for Ethernet Channel. 1+0 and 1+1 protected configuration maybe used with TDM AL..F radio relay link.





Memory Map

- 0000 - 1FFF PAULMON2 Monitor
- 2000 - 3FFF SRAM
- 4000 - 5FFF 82C55 I/O Chip
 - 4000: Port A (read or write)
 - 4001: Port B (read or write)
 - 4002: Port C (read or write)
 - 4003: Configure (write only)
- 6000 - 7FFF User Expansion (Y6 signal assert low)
- 8000 - FFFF Flash ROM

All memory on the rev 3 of AL Series boards is read using MOVC (code space). The RD signal is not connected, so MOVX may not be used to read the memory.

Parts List

Quantity	Reference	Part
2	C1,C2	Capacitor, 22 to 33 pF
8	C3,C4,C5,C6,C7,C8,C9,C10	Capacitor, 10 µF, 35V
7	C11,C12,C13,C14,C15,C16,C17	Capacitor, 0.1 µF
1	D1	1N5819
8	D4,D5,D6,D7,D8,D9,D10,D11	LED, T-1 Size
1	R1	1MEG
1	R2	1K
3	R4,R5,R6	10K
8	R7,R8,R9,R10,R11,R12,R13,R14	470 to 1k (depending on LED brightness)
1	U1	87C52 (or equiv), pgm w/ PAULMON2 v2.1
1	U2	74HC373 (Octal Latch)
1	U3	6264 (or similar 8K x 8 SRAM)
1	U4	SST39F512 (Flash ROM)
1	U5	82C55 (I/O Chip)
1	U6	74HC138 (3:8 Decoder)
2	U7,U8	74HC00, Quad NAND Gate
1	U9	MAX232
1	Y1	11.0592 MHz Crystal
2	P1, P2	DB-9 Female Connector, Digi-Key Part # A2100
1	JP5	Molex 2 Pin Header w/ Locking Ramp
2	JP6,JP13	2 Pin Header (a single 4 pin may be used)
1	-	7805, 5 Volt Linear Regulator
1	-	Heatsink
1	-	Machine screw, 4-40, 1/2 inch
1	-	Nut, 4-40
2	-	14 Pin DIP Socket
2	-	16 Pin DIP Socket
1	-	20 Pin DIP Socket
1	-	28 Pin DIP Socket
1	-	32 Pin DIP Socket
2	-	40 Pin DIP Socket