Fermilab
Particle Physics Division/CDF Upgrade Project

Specification for
TTL to PECL
1 To 9 Fanout Module

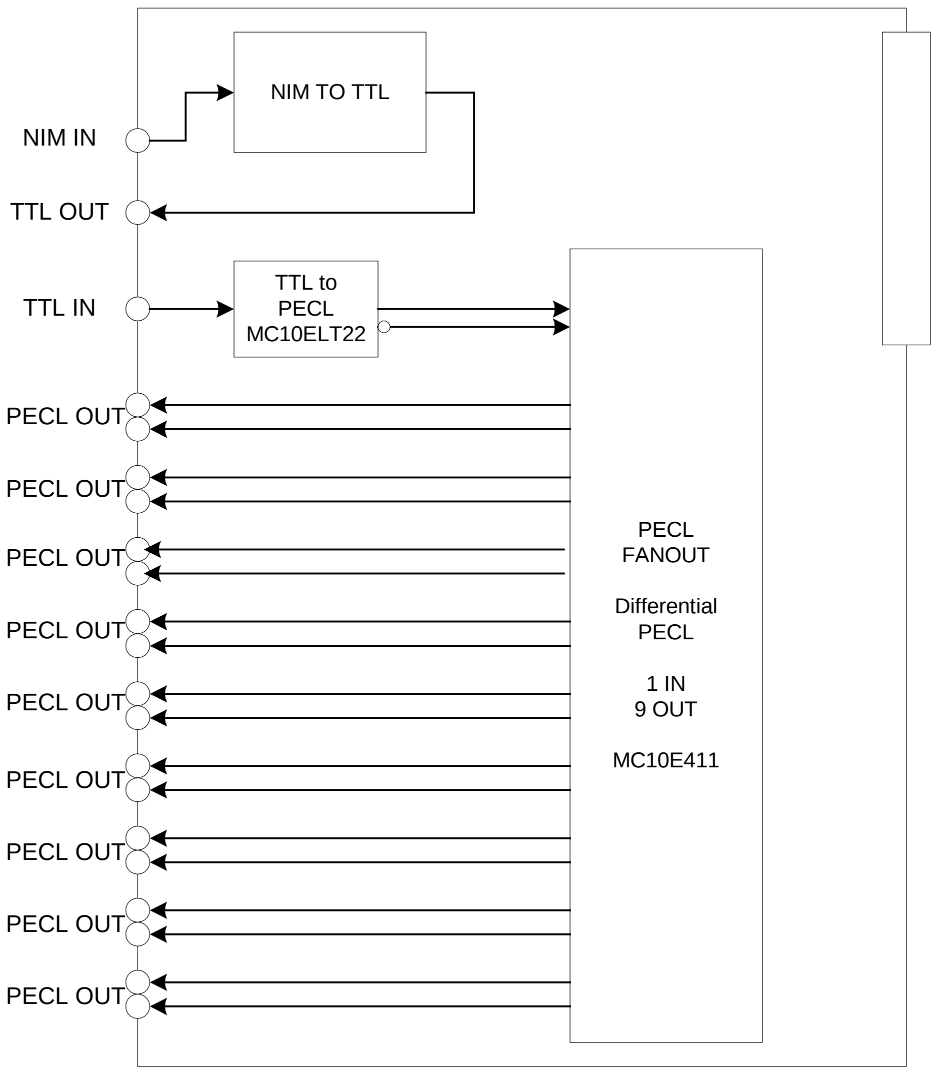
Introduction

The COT Calibration system will require several custom modules. This paper will describe the requirements of a PECL fanout module. The Fanout module will receive a TTL input from a Berkley Nucleonics VME Digital Delay Generator. It will then fan that input out to 9 differential PECL pairs driven out 9 pairs of front panel BNC connectors.

Additionally, there is a need for a NIM to TTL converter on the module. The TTL output could be used to drive the fanout input in a diagnostic mode.

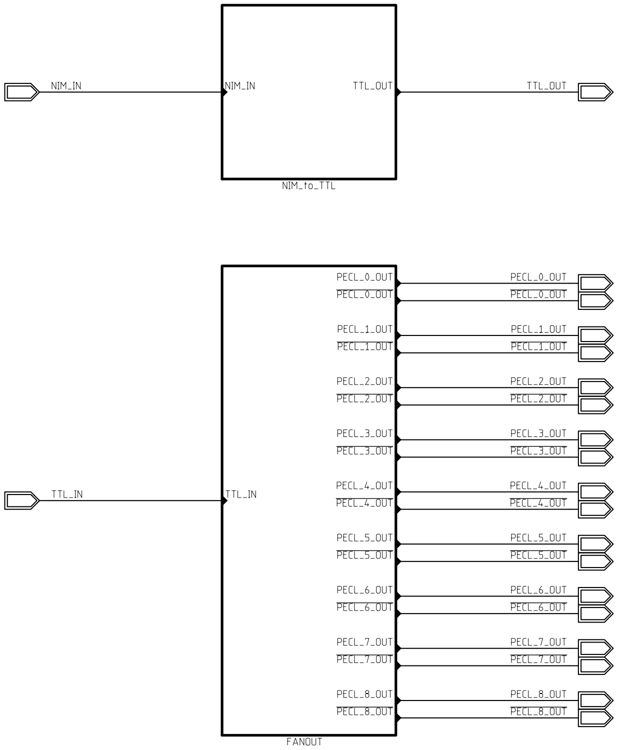
The fanout module will be built in a 9Ux400mm VMEbus format and use only the 5V and –12V standard voltage pins. No VMEbus functions are included on the bus.

A block diagram of the module, along with a sketch of the front panel is shown below:


NIM IN
TTL OUT
TTL IN
NIM TO TTL
TTL to
PECL
MC10ELT22
PECL OUT
PECL OUT
PECL OUT
PECL OUT
PECL OUT
PECL OUT
PECL OUT
PECL OUT
PECL OUT
PECL
FANOUT
Differential
PECL
1 IN
9 OUT
MC10E411

REVISIONS

REV	DESCRIPTION	DATE	APPROVED



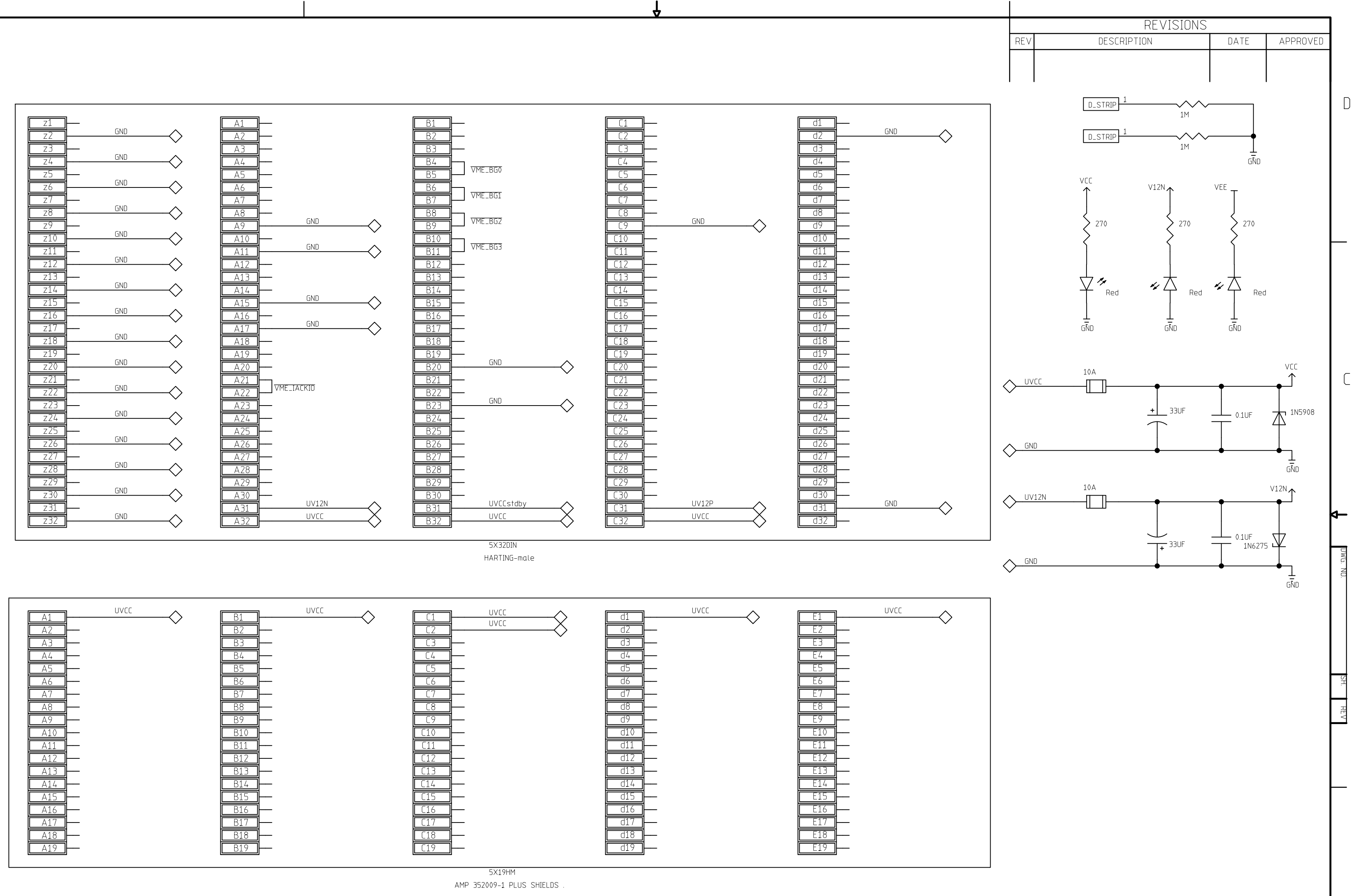
CONTRACT NO.

APPROVALS		DATE
DRAWN	T. Shaw	5/6/99
CHECKED		
ISSUED		

9:1 Fanout Module
Top Level Schematic

SIZE C
FSCM NO.
DWG. NO.
REV
SCALE
SHEET

DWG NO
SH
REV



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APPROVALS	DATE
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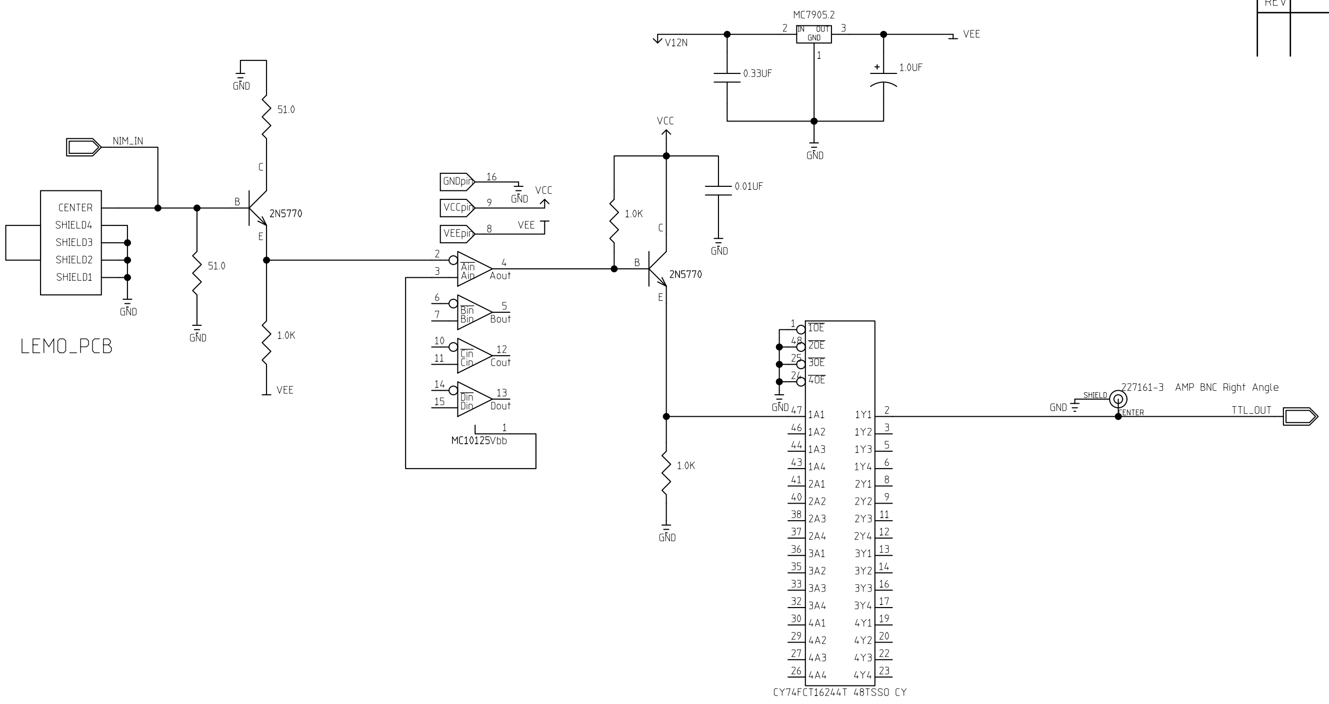
CHECKED	
ISSUED	

9:1 Fanout Module

Backplane Connectors - Power Only

SIZE C
FSCM NO.
DWG. NO.
REV
SCALE
SHEET

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED



DWG. NO.
SH
REV

CONTRACT NO.		
APPROVALS	DATE	9:1 Fanout Module NIM to TTL Converter
DRAWN T. Shaw	5/6/99	
CHECKED		SIZE C · FSCM NO. · DWG. NO. · REV
ISSUED		
		SCALE · SHEET

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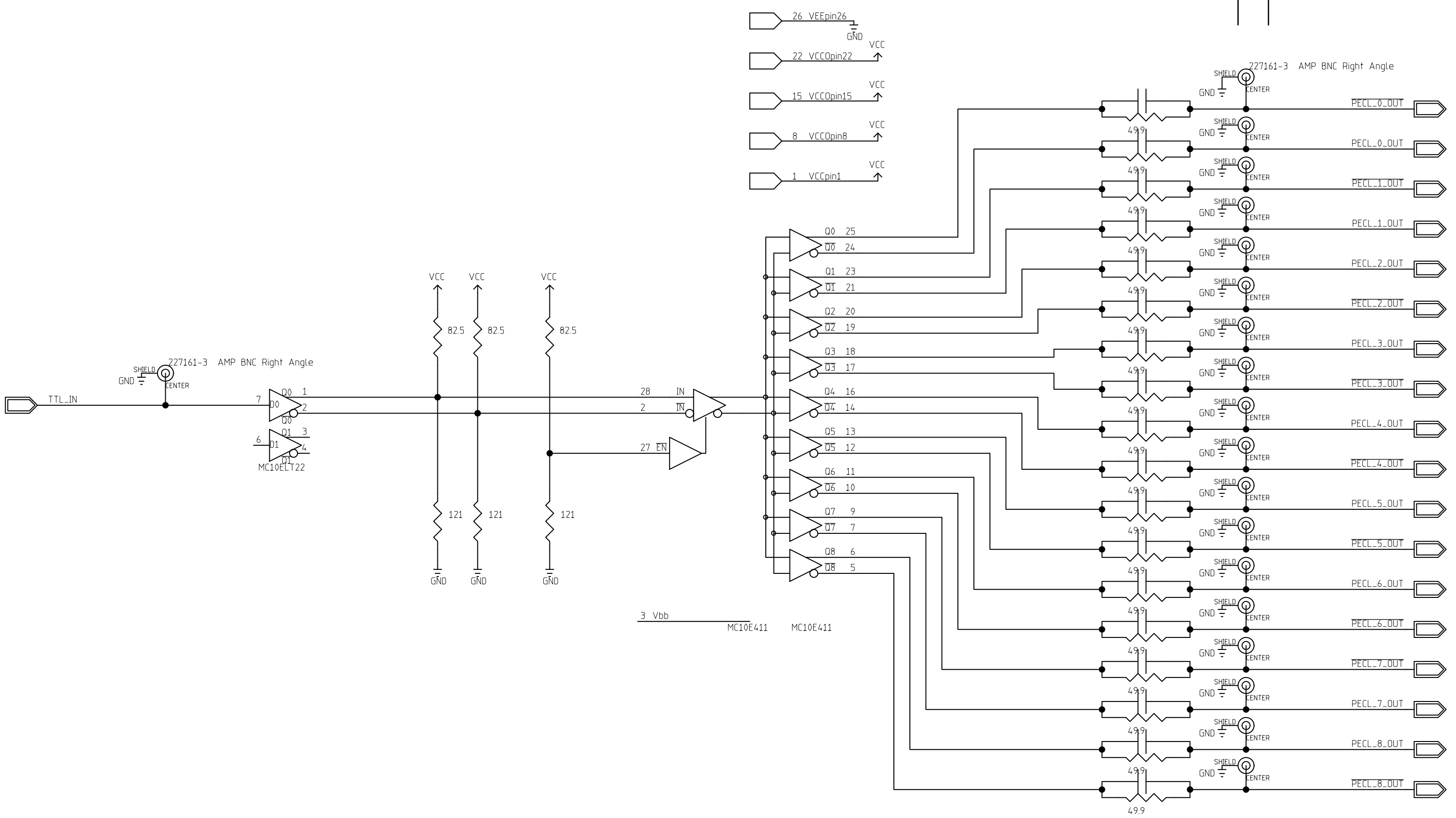
REVISIONS

REV	DESCRIPTION	DATE	APPROVED



DWG NO

SH

REV

CONTRACT NO.				
APPROVALS	DATE	9:1 Fanout Module Differential PECL Fanout		
DRAWN T. Shaw	5/3/99			
CHECKED		SIZE C	FSCM NO.	DWG. NO.	REV
ISSUED				
		SCALE		SHEET

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